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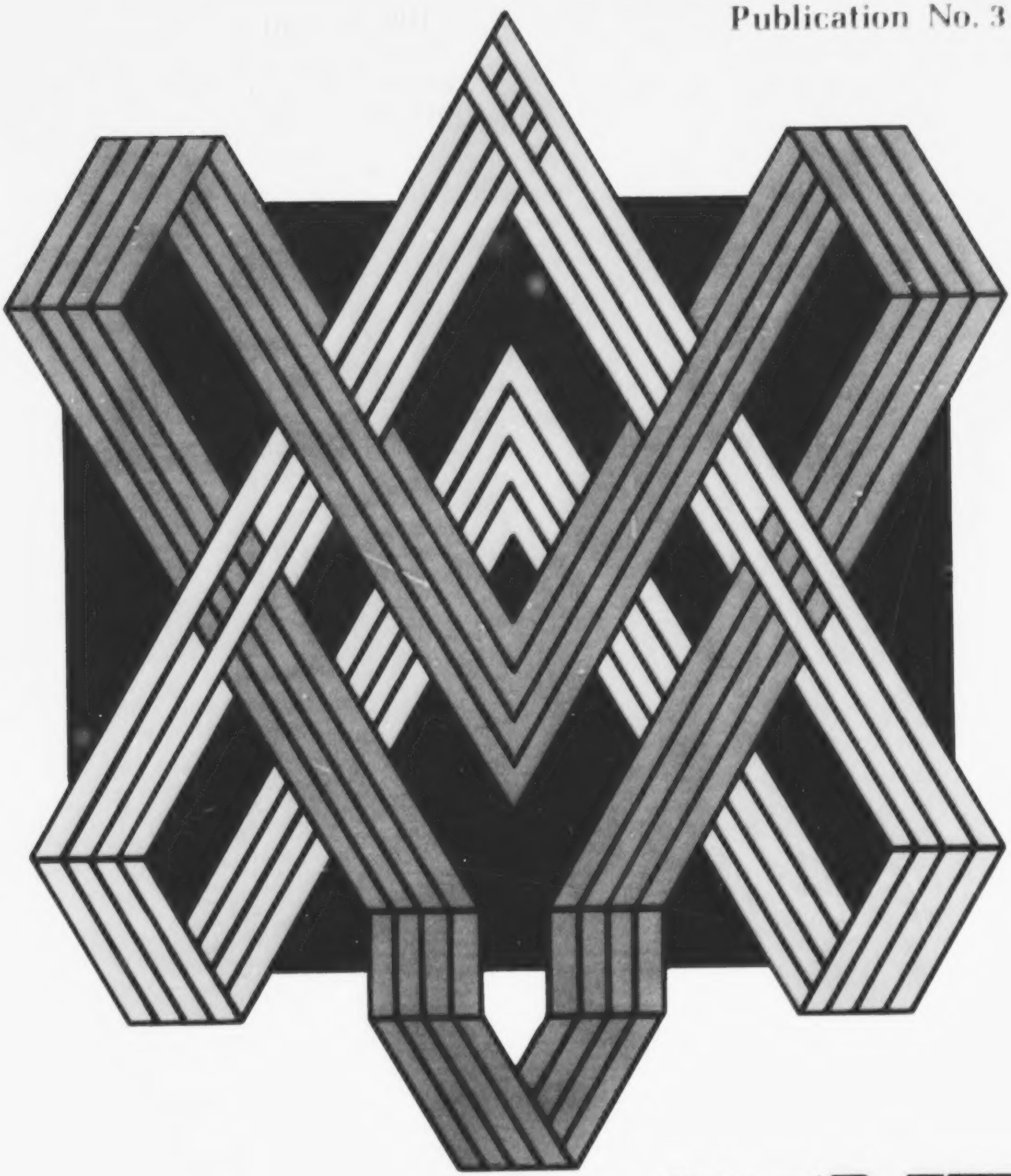
The Vocational Education Study: The Interim Report

Vocational Education Study
Publication No. 3



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The Vocational Education Study: The Interim Report

Vocational Education Study
Publication No. 3

September 1980

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Vocational Education Study Publication No. 3

FOREWORD

This document reports on the progress of the National Institute of Education Vocational Education Study mandated by the Education Amendments of 1976 (P.L. 94-482). It presents some of the significant consequences of selected changes in Federal vocational education legislation adopted in 1976, and describes key features of the public school vocational education enterprise. In addition, it deals in a preliminary way with a much-debated question: what can be said with confidence on the basis of present knowledge about the effects that vocational education programs have upon the individuals who participate in them?

The Interim Report does not present conclusive findings on any of the themes with which it deals. Major aspects of the Study's research and analyses of new data still remain to be completed. None of the final reports of the Study's contracted extramural research had been submitted in time to be used in the preparation of this Report. Much of the Study staff's intramural research is still in progress.

The Interim Report does, however, make every effort to report what has been learned thus far about many issues that will be treated definitively in the Institute's Final Report to the President and the Congress, which is to be transmitted by September 30, 1981. Among the issues given extensive treatment here are: the effectiveness of the new requirements of the Education Amendments of 1976 in determining the State distribution procedures for Federal grant-in-aid funds, State vocational education planning processes and outcomes, and State and Federal evaluation activities.

The Final Report will present the full range of the Study's conclusive findings and their implications, if any, for changes in the structure and substance of Federal vocational education policy in the future.

The Vocational Education Study Project Director is Henry David and the Assistant Project Director is Gerry Hendrickson. At present, the other members of the Study staff are Louise Corman, Thomasine Hollis, Rodney Riffel, Bella Rosenberg, Stuart Rosenfeld, and Alison Wolf.

Michael Timpane
Director

September 1980

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EXECUTIVE SUMMARY

Introduction

Title V, Section 523 (b), of the Education Amendments of 1976 (P.L. 94-482) charges the National Institute of Education (NIE) with undertaking a study of vocational education and related programs, including inquiries into (1) the distribution of vocational education funds; (2) compliance with the applicable laws of the United States; (3) the means of assessing program quality and effectiveness; and (4) consumer and homemaking education programs. The Institute is required to transmit to the President and the Congress a Final Report on its Vocational Education Study no later than September 30, 1981, which is to contain findings and recommendations, including those for changes in legislation, and an Interim Report a year earlier. The legislative mandate also required the Institute to submit a plan for the Study to the Congress for review and approval by the close of 1977.

The Study is supported at the level of $1 million a year and is being conducted through intramural and contracted extramural research. The final results of the extramural research projects, as well as of the intramural studies, will not be available until the close of 1980 or during the first third of 1981.

The central subject of this Interim Report, which draws upon the findings of research that is still in progress, is to trace, to the extent the partial evidence permits, the effects that the 1976 changes in Federal vocational education legislation have had thus far upon the distribution of Federal funds and the planning and evaluation of vocational education programs by the States. In addition, the Interim

Report presents the results of soundly conducted research on the effects of participating in vocational education programs and describes selected key features of the public school vocational education enterprise.

That enterprise is national in scale, shaped by local, State, and Federal policies and concerns, and is governed and operated by States and localities. It is a congery of different systems and not a single system; it is decentralized and diversified. Its programs of instruction are offered in different kinds of institutions. The students enrolled in its wide variety of programs and courses--some of them prevocational and nonoccupational--numbered 17.3 million in 1979. They were distributed among programs differing in educational levels, content, duration, and objectives. Probably more than 7 million students were enrolled in occupationally specific, longer-term programs of instruction in secondary and postsecondary schools. Exactly how much the nation spends on its public school vocational enterprise is not known. Reported expenditures are in the order of $6 billion, of which the Federal share in Vocational Education Act dollars alone is less than one-tenth.

Federal Vocational Education Legislation

Federal vocational education legislation for public schools began with the Smith-Hughes Act of 1917, which allotted funds to States to be used exclusively for teacher salaries and teacher training, to assist them in offering high school courses in agriculture, trade, industry, and home economics. The law prescribed course format, stipulating, for example, the duration of instruction and the balance between formal learning and practical experience. The purposes and the occupational fields for which Federal monies could be used were substantially expanded by later legislation, but the key features of the Smith-Hughes Act persisted for almost 50 years.

The Vocational Education Act (VEA) of 1963 and the 1968 Amendments to that measure made major changes in Federal vocational education policy. Chief among them were the new concerns with relative fiscal need, economically depressed areas, and the special needs of the disadvantaged and the handicapped. In addition, the legislation sought to increase the responsiveness of vocational education programs to changes in occupations and labor market conditions by shifting from programmatic funding and adopting more prescriptive planning requirements. The States were instructed to show how they proposed to use Federal, State, and local vocational education funds in relation to local economic conditions and job opportunities and to the needs of special groups and economically depressed areas. The 1963 Act also encouraged postsecondary and adult vocational education.

The Education Amendments of 1976, which further amended the Vocational Education Act, made no change in the goals and purposes of Federal policy. The emphasis on special-needs groups and areas was retained and was expanded with a new provision covering limited English-speaking individuals, and another equity commitment, to reduce sex bias and sex-role stereotyping in vocational education, was added. The legislation also reaffirmed the need to articulate vocational education programs more closely with labor market conditions and technological and occupational changes.

The 1976 provisions were strongly influenced by reports and hearings highly critical of the administration of the vocational educational enterprise and its shortcomings in attaining the objectives of Federal policy. Two legislative remedies were adopted: (1) new requirements for the distribution of Federal funds, so as to target more effectively special high-need individuals and high-need districts and to encourage new programs geared to labor market needs; and (2) strengthened and more prescriptive requirements for planning, evaluation, and accountability, so as to increase the responsiveness of vocational education to labor market demand and supply conditions. The legislation also sought to enhance Federal oversight and enforcement capabilities, and consolidated categorical programs in order to give the States greater flexibility and improve their capacity for planning. Finally, it introduced measures for reducing sex bias and sex-role stereotyping.

Current Federal vocational education legislation is complex and reflects the several goals of Federal policy. Moreover, it also reflects different approaches to the mechanisms to be relied on by the Federal government in influencing the substance and effectiveness of State and local vocational education programs.

The Effects of the 1976 Legislation upon the Distribution of Funds

The Vocational Education Act provides grants-in-aid to the States, the District of Columbia, and the territories allotted on the basis of population, stratified by age, multiplied by the ratio of national to individual State median income. The States and the other jurisdictions distribute the Federal funds to local education agencies and other eligible recipients according to criteria specified in the Act and in the consequent rules and regulations.

Probably no aspect of the 1976 Amendments has generated more problems, confusion, and controversy than the required procedures for distributing Federal funds. One source of the problems is the Act itself, for it combined separate provisions from the House and Senate bills without reconciling them. The result is a set of requirements consisting of the following: two "priority" factors based on economic conditions; two "distribution" factors based on ability to pay; set-aside provisions for a variety of special-needs groups and postsecondary and adult students; and still other priorities for using Federal funds. The result is that some distribution requirements are overlapping and some contradictory.

A second source of the problems has been the interpretations of the distribution requirements by the U. S. Office of Education's Bureau of Occupational and Adult Education (BOAE). The complexity and lack of clarity of the Vocational Education Act have meant that Federal administrators have had to assume substantial responsibility in trying to insure that the distribution of funds by the States is congruent with Federal goals. Initially, BOAE issued regulations which failed to provide adequate guidance. However, the need for clarification then led BOAE to produce a Policy Manual for the States (which is still in draft form) to specify the measures that would be acceptable to represent the distribution and priority criteria in the statute.

BOAE's efforts to clarify exacerbated the very problems they were designed to rectify. It was not constant in its interpretations of which distribution measures were acceptable under the Act.

The problems with the distribution requirements were reflected in the experiences the States have had with the formulae they adopted in order to meet them. Every single State has had a formula disapproved for one reason or another during the last three years. Beyond the question of whether formulae meet legal requirements is the question of their technical adequacy. No State has designed procedures wholly free of defective mathematical logic, arbitrary judgment, questionable interpretations of Federal law and regulations, or inaccurate or inappropriate data.

For Federal dollars to have their intended effects, it is essential that they supplement the far larger base of support for vocational education provided by State and local funds. Provisions in the legislation with respect to maintenance of effort and supplanting thus have the effect of placing constraints on the uses of State and local dollars. Supplanting is particularly difficult to define and enforce, since it is nearly impossible to know what activities State and local funds would pay for in the absence of Federal funds. With Federal dollars being such a small part of all vocational education expenditures, it is essential that they be used in a supplementary manner in order to have the maximum effect on local programs.

The Effects of the 1976 Legislation upon Planning

Planning requirements in Federal vocational education legislation have long been viewed as an important means to the end of increasing system-wide compliance with Federal policy objectives. The Congress, prior to formulating the 1976 Amendments, was presented with evidence about defects in the planning process for vocational education that were inhibiting the Federal effort to reform the enterprise. Consequently, it sought to strengthen planning requirements and to increase flexibility in planning decisions. It is easier to determine whether the planning requirements of the 1976 legislation have been implemented than it is to judge whether they have served to help achieve the goals of Federal vocational education policy. A discussion of the second issue is based on an examination of the effects of these requirements only three years after passage of the Act and therefore is tentative.

The 1976 planning requirements had three major purposes. First, they sought to bring about more comprehensive and coordinated planning--that is, to broaden participation in planning and to reduce program duplication and overlap--through the creation of State Plan Committees comprised of ten members representing major vocational education service deliverers; through public State hearings on the plans; and by stipulating various approvals and sign-offs, such as that by the sex-equity coordinator. Second, the legislation sought to have planning take better account of labor market demand and supply data, and, accordingly, it created the National Occupational Information Coordinating Committee (NOICC), with parallel committees in each State (SOICCs) to coordinate and systematize such data.

It also required the State plans to be informed by evaluations of vocational student placement and employer satisfaction. Finally, it sought to reduce the paperwork burden placed on the States and to increase the substantive nature of the plans. States are instructed to distribute Federal vocational education funds on the basis of local applications demonstrating the use of a similar planning process. Thus, local agencies were expected to plan in conjunction with local education and training representatives, and to submit applications describing the vocational needs of potential students and showing how the proposed program would meet those needs. Local applications were also to show the use of evaluations, coordination with Comprehensive Employment and Traning Act (CETA) programs, and the relationship between Federally-funded and State-and local-funded programs.

Federal planning requirements apply to both the State and local levels, but it falls to the States to communicate Federal goals to local agencies and to invoke them in reviewing applications from eligible recipients. The influence of the States is constrained both by the tradition of local autonomy and the Federal funds distribution requirements. It is particularly weak in respect to local decisions on vocational education programs funded with local or State general aid funds. The decisions that largely determine the nature of the vocational education enterprise are made by local agencies, but the Federal planning requirements designed to affect the substance of vocational education programs are primarily directed at the States.

The available evidence indicates that the provisions of the planning requirements are largely in place. The State

Plan Committees are operational, public hearings are being conducted, the NOICC and the SOICCs have been established, and the State plans for the most part contain the required documentation. In addition, the consolidation of nine categorical programs into four broad subparts of the legislation gives the States, at least in theory, greater flexibility in planning decisions.

The available evidence, however, does not yet show that the hopes for substantive changes have been realized to any significant degree. Much of the planning for postsecondary and CETA programs appears to occur apart from secondary vocational education planning. There is little proof as yet that programmatic decisions are more in tune with labor market conditions because of the operations of SOICCs or the availability of improved student placement data. In addition, it appears that the State planning documents are not used for operational purposes.

These partial findings speak to what had taken place by school year 1979-80, three years after enactment of the 1976 Amendments. It remains to be seen whether the requirements for an open, informed, more coordinated planning process can bring about the desired results in a decentralized vocational education enterprise.

Federal enforcement activities had been considered important devices for insuring vocational education reforms. Both the House and the Senate had been critical of BOAE's past monitoring of State activities. The 1976 legislation introduced new measures intended to strengthen enforcement of provisions of the Vocational Education Act. BOAE has been vigorous in reviewing the State plans, which are now reviewed against a detailed "checklist" of key provisions in the regulations. Whether the considerable industry expended on plan review contributes to having a State's vocational education programs fulfill the goals of Federal policy is an open question, for the evidence to date suggests that the process serves primarily to insure compliance with the letter of the legislation.

The Effects of the 1976 Legislation upon Evaluation

The 1976 Amendments require States to evaluate each of their Federally-funded vocational education programs every five years and to assess those programs purporting to impart entry-level job skills in terms of students' placement in occupations related to their training and employer satisfaction. The intentions underlying these requirements were that evaluation results would be used to manage and improve programs in such a way as to insure greater congruence between vocational education programs and labor market conditions.

The U.S. Office of Education interpreted these requirements in the rules and regulations for the legislation issued on October 3, 1977, extending the evaluation requirements to cover programs funded by States and localities. Moreover, they broadened the evaluation categories to include, in addition to student placement and employer satisfaction, a review of planning and operational processes, student achievement, and the effects of additional services provided by States to special needs populations. The regulations do not detail how evaluations are to be used to review and improve programs.

When the 1976 Amendments were enacted, few, if any, States had in place evaluation procedures as complex or as comprehensive as those envisioned by the legislation. Most States, however, were reviewing or monitoring programs in some fashion.

Despite a number of financial and technical obstacles to meeting the requirements, the States proceeded to develop evaluation procedures or to extend mechanisms already in place. By school year 1979-80, most States had completed developmental work on program review procedures and on student follow-up, compressing their program evaluations into the last three years of the cycle.

To date, the States have demonstrated a genuine commitment to and serious investment in evaluation, although they vary greatly in the scope and intensity of their efforts. In the fifteen States studied, the most consistently implemented evaluation requirement is program review of planning and operational processes. The usefulness of this type of evaluation had long been accepted by the States, but the 1976 Amendments succeeded in having the States conduct more systematic reviews and in extending them to address new issues.

Follow-up of students to ascertain job placement is the next most firmly implemented type of evaluation. Once again, the Amendments stimulated the States to systematize an activity whose usefulness was generally established. States are also collecting job-placement data on vocational education students, although the technical difficulty and costs of securing reliable, standardized data are considerable. Formal follow-up data on employers' satisfaction are collected much less consistently and willingly by the States. The States still regard local collection of student achievement data as preferable to a uniform, State-wide data-gathering procedure. Most of them, however, have made some effort to systematize these assessment procedures. The fourth requirement of the regulations, evaluating the results of additional services to special needs populations, has in practice meant that States assess the extent to which these populations have access to vocational programs and services.

The ways in which States have thus far used evaluation results vary as much as their implementation of the requirements does. In all fifteen States studied, the results of program review of planning and operational processes are used to guide local education agencies in improving their offerings. All States offer local agencies technical assistance in improving programs, but vary considerably in the means they use to oversee changes and insure that they are made. The use of student follow-up data varies more widely than the use of program review data. Most States also distribute the results of student-placement evaluations to individual school districts, although they do not specify how this information is to be used.

In sum, then, the 1976 Amendments have strengthened the evaluation capabilities of the States. Evaluations usually focus more on program quality than on outcomes. Evaluation findings are used to revise and improve programs in most States, but not exactly in the way the legislation envisioned. Most of the improvement comes about as a result of program reviews which set forth program strengths and weaknesses. Technical assistance is offered to remedy deficiencies, but rarely are results used to terminate programs or inform funding decisions.

Determining the Effects of Vocational Education on Participants

The task of determining the effects of schooling in general, or of vocational education in particular, on students' subsequent attainments is extremely difficult. Many factors other than school curriculum--the effects of any one of which cannot readily be disentangled from the effects of others--affect the economic and noneconomic experiences of learners after they leave school. The number of methodologically sound studies on the effects of participating in vocational education programs is relatively small, and there is little firm knowledge about the outcomes for individuals who participate in postsecondary vocational education programs.

Prior research indicates that the typical high school vocational education student reads, writes, and computes at about the same level of proficiency as a student in the general curriculum, but is less well informed than the general curriculum student about several occupations, particularly those requiring a college education.

Prior research also indicates that the vocational education high school graduate is less likely to be unemployed, especially if the student is black, and is more likely to be in a semi-skilled or skilled job than is the general curriculum graduate. The hourly wage and the number of hours worked per week will probably not be very different for graduates of the two curricula. The vocational education student will probably express satisfaction with the job. Employers are likely to be satisfied with the student's attitudes toward work and preparation in the job-related skills. Within the first four years after high school, the high school vocational education graduate is no more likely than the general curriculum graduate to be self-employed or to continue education in a postsecondary program at a technical institute or community or junior college.

The typical high school student in a commercial vocational education program is female. This student reads about as proficiently and writes better than the average student in the general curriculum or in other vocational education programs, but is less proficient in computational skills. The commercial student is less apt to drop out of high school before graduation than a student in the general curriculum. Morever, in the years following graduation, the typical student in a commercial program is likely to be employed in a job related to his or her training, and is less likely to experience unemployment than the student in the general curriculum.

INTRODUCTION

The first stage of the study of vocational education and related programs which the Education Amendments of 1976 charged the National Institute of Education with undertaking was devoted to the preparation of A Plan for the Study of Vocational Education. It was submitted to the Congress for review and approval at the close of 1977, and may be regarded as the initial report on the Congressionally-mandated study. Since then, the Vocational Education Study Project has issued status reports on its work.

The Institute is required by the 1976 legislation to transmit two reports on the Study to the President and the Congress--an Interim Report, no later than September 30, 1980, and a Final Report one year later.

One relatively brief chapter in this Interim Report, the first, is devoted to an account of the way in which the Study has been conducted since early 1978, after the Congress approved the Institute's Study Plan. The central concern of the Interim Report is with the 1976 amendments to the Vocational Education Act of 1963, particularly with those designed to effect changes in the distribution of Federal grant-in-aid funds by the States, in the State plans for vocational education, and in State program evaluation activities. Chapter II provides an overview of "Federal Vocational Education Legislation," and treats in greater detail the reasons for and the nature of the amendments to the Vocational Education Act adopted in 1976. The next three chapters deal with (1) such issues as may have arisen in connection with the meaning of the new statutory provisions and requirements (and the consequent rules and regulations) bearing upon the distribution of Federal funds, planning, and evaluation by the States; (2) with the interpretation, implementation, and communication to the

States of these new provisions and requirements; and (3) with their discernible consequences up to mid-1980. The successive treatments of the effects of the 1976 legislation upon the distribution of funds, planning, and evaluation in Chapters III, IV, and V describe, to the extent the available evidence permits, the ways in which selected aspects of the intent and letter of the legislation have been perceived, interpreted, and implemented by both the Federal and State governments over a three-year period.

The four chapters on legislation that constitute the core of the Interim Report focus by design somewhat narrowly upon Federal vocational educational policy. They do not deal with developments in other domains of Federal policy, both educational and noneducational (such as employment and training policy), that bear upon vocational education programs. Treatments of these related policies, in particular of the coordination of vocational education programs with those of the Comprehensive Employment and Training Act of 1973, as amended, are reserved for the Final Report. So, too, are treatments of other key purposes of Federal vocational education policy. The most important of these is the promotion of equality of educational opportunities for all students. This objective embraces the attainment of sex equity and the provision of vocational education programs and services for groups in the population with special needs.

In describing some of the key features, Chapter VI, "The Vocational Education Enterprise," seeks to delineate the national scale, diversity, and complexity of the public agencies and institutions (up to the first baccalaureate degree level) through which individuals acquire and develop occupational knowledge and skills. Chapter VII, "Determining the Effects of Vocational Education on Participants," the last chapter, illuminates how difficult it is to do this in fact. It also reports on the findings of soundly conducted research on outcomes attributable to participating in vocational education programs.

All the present members of the Vocational Education Study Project staff have contributed to the Interim Report. In its preparation, work done by former staff members has also been drawn upon. This Report, consequently, is the product of an integrated, collective effort. However, individual staff members deserve to be singled out for their distinctive contributions. Gerry Hendrickson and Alison Wolf were jointly responsible for preparing Chapters II, III, IV, and V. Stuart Rosenfeld was responsible for preparing the materials for Chapter VI and contributed significantly to the preparation of Chapters II and III. Louise Corman was responsible for preparing Chapter VII.

Whenever possible, the Study staff utilized the fruits of the extramural contract research which is still in progress and drew upon the information and counsel generously provided by a host of Federal, State, and local officials concerned with vocational education policies and programs. The Study's indebtedness to them for their assistance is great. If they were less numerous, their contributions would be individually acknowledged, as they should be. The Interim Report, as well as the Vocational Education Study as a whole, has benefitted richly from the advice and penetrating criticisms of the members of its Consultant Group. In the course of the Study, Institute staff members have been generous with their assistance. The Associate Director of the Program on Educational Policy and Organization, Marc S. Tucker, has been unfailing in trying to facilitate the work of the Vocational Education Study staff, as has been the Director's Office. To the Institute's Director, the staff is particularly grateful for his unflagging interest in the Study, and his advice on the Interim Report, and his constructive criticisms of its draft versions.

Henry David

Project Director

Gerry Hendrickson

Assistant Project Director

CHAPTER I. THE MANDATE AND THE STUDY

The Mandate

Title V, Section 523(b), of the Education Amendments of 1976 (P.L. 94-482) charges the National Institute of Education with undertaking "a thorough evaluation and study of vocational education programs conducted under the Vocational Education Act of 1963, and other related programs conducted under the Comprehensive Employment and Training Act of 1973 and by the State Post-Secondary Commissions authorized by the Education Amendments of 1972."[1] The legislation states that the inquiry "shall include--

> (A) a study of the distribution of vocational education funds in terms of services, occupations, target populations, enrollments, and educational and governmental levels and what such distribution should be in order to meet the greatest human resource needs for the next 10 years;
>
> (B) an examination of how to achieve compliance with, and enforcement of, the provisions of applicable laws of the United States;
>
> (C) an analysis of the means of assessing program quality and effectiveness; . . . and
>
> (D) a review and evaluation of the effectiveness of programs funded under subpart 5 of part A of the Vocational Education Act of 1963 . . . (which contains the Consumer and Homemaking Education provisions of the law) and to make recommendations for the redirection and improvement of programs at all levels funded under such subpart."

In addition, the Institute is to make "findings and recommendations, including recommendations for changes in" the existing legislation "or for new legislation . . . ."

The mandate also authorized the Institute to secure funds from the United States Commissioner of Education and the Secretary of Labor to conduct as many as three "experimental programs" that would contribute to the required studies of funds, compliance, and the means for assessing program quality and effectiveness. This was in effect a license to seek funds in addition to those specifically provided for by the statute. However, support for such experimental programs could not be secured from either the Department of Labor or the U.S. Office of Education.

The Education Amendments of 1976 provide that up to $1 million a year "for each of the fiscal years ending prior to October 1. 1981" of the monies appropriated for Sections 102 and 103 of the Vocational Education Act of 1963. as amended, be made available to the National Institute of Education to conduct the Study. The law also allocates 10 percent of those funds to the required study of Consumer and Homemaking Education (C&HE) programs. Contributions in funds have amplified the resource base for the Study, as will be seen. These have been made by the Institute itself, the Bureau of Occupational and Adult Education (BOAE) of the United States Office of Education (USOE), the National Advisory Council on Vocational Education (NACVE), and the National Center for Research on Vocational Education (NCRVE) at the Ohio State University.[2]

Under the mandate, the Institute is required to make two reports to the President and the Congress. The first, an interim report, must be submitted no later than September 30, 1980, and is represented by this document. The second, a final report on the results of the Study, must be transmitted no later than September 30, 1981. It is important that the law provides that these "reports shall not be submitted to any review outside of the Institute before their transmittal to the Congress. . . ." It also. in effect, authorizes the President and U.S. Commissioner of Education[3] to make recommendations to the Congress "with respect to the contents of" both reports.

The Study Plan

Under the mandate, the Institute was also directed to submit a plan for its Study to the Congress for review and approval. On December 30, 1977, the Institute transmitted to the Congress *A Plan for the Study of Vocational Education*.[4] The Institute's Vocational Education Study staff secured assistance on the development of the plan, as well as on future research activities, in several ways. It established a Consultant Group, technical committees, and a Liaison Committee, consisting of representatives of nongovernmental organizations and associations in the field of vocational education. It constructed a network of key individuals in pertinent Federal and State agencies and private voluntary associations. It commissioned papers treating vocational education policy, programs, practices, and problems from a variety of perspectives. A selected number of these papers, which were prepared in 1977, were published two years later in two volumes: *The Planning Papers for the Vocational Education Study* and *The Planning Papers on Consumer and Homemaking Education Programs*.[5]

The study plan gave primary emphasis to the four lines of inquiry called for by the legislation: (1) the distribution of vocational education funds; (2) compliance with the applicable laws of the United States; (3) the means of assessing program quality and effectiveness; and (4) a review and evaluation of Consumer and Homemaking Education (C&HE) Programs. The plan described the set of interrelated research projects that were to be conducted on each of these topics. It also recognized, however, that other lines of inquiry would have to be pursued in order to assure that the Study would be attentive, first, to the policy issues that would surface with the forthcoming reauthorization of the Vocational Education Act and, second, to the place of the public school vocational education enterprise within the larger domain of organizations and institutions providing occupational education and training. The plan noted that the Study would seek to "contribute findings of fact, policy relevant analyses, judgments and insights" useful in formulating future legislation. The plan also commits the Study to describing the nation's public vocational education enterprise--to providing a "fact book" on it-- so that the role of the Federal Government in it would be more fully illuminated and understood.

The plan made it clear that the Study is a policy inquiry, rather than a conventional "program evaluation." Its primary focus is Federal vocational education policy--its purposes, structure, implementation, and consequences. Thus, it seeks to ascertain what changes in the nation's decentralized and highly diversified public school vocational education enterprise may be attributed to the Education Amendments of 1976.

The research strategy of the Study plan reflects the constraints imposed by the available resources of money and personnel. Since only a small staff could be appointed, most of the inquiry would be pursued through extramural contract research. Since the financial means were insufficient to collect data through national surveys, reliance would be placed upon case studies and the exploitation of existing data and information sources. Among the latter would be those generated by requirements of the Education Amendments of 1976, such as the new Vocational Education Data System (VEDS), the State plans and accountability reports, State and Federal program evaluations, and the annual and evaluative reports of the State Advisory Councils on Vocational Education (SACVE).

The Study plan was prepared under the assumption that, as work progressed and understanding increased, modifications in research design could be effected, individual projects could be reduced or amplified, and additional lines of inquiry could be pursued. It was also assumed that a substantial number of pertinent studies would be conducted under the auspices of other agencies and organizations, the results of which would be useful for preparing the Institute's final report.[6]

Implementing the Study Plan

More than three-fifths of the resources for the Study are allocated to extramural research efforts and support activities provided through contractual arrangements. The remainder is used to meet intramural administrative and research costs. The six major contracts awarded[7] are:

(1) Distribution of Federal, State, and Local Vocational Education Funds, awarded September 1978 to the University of California at Berkeley, School of Education, for a 36-month study, at a cost of $762,000, including some $70.000 transferred to the NIE from the Bureau of Occupational and Adult Education, U.S. Office of Education.

(2) State and Local Compliance and Evaluation Practices, awarded September 1978 to Abt Associates, Inc. Cambridge, Massachusetts, for a 36-month effort, combining the compliance and evaluation studies, at a cost of $611,000.

(3) Responsiveness of the Consumer and Homemaking Education System at the State and Local Levels, awarded September 1978 to CRC Education and Human Development, Inc., Belmont, Massachusetts, for a 21-month study, at a cost of $275,000.

(4) Meeting the Special Needs of Special Groups, awarded February 1979 to A. L. Nellum and Associates, Inc.,

Washington, D.C., for a 21-month study, at a cost of $121.000.

(5) The Effects of Participating in Vocational Education Programs, awarded to The Huron Institute, Cambridge, Massachusetts, for an 18-month study, at a cost of almost $130,000, not including resources contributed by the National Advisory Council on Vocational Education and the National Center for Research in Vocational Education. The inquiry's scope has been expanded with additional funds, provided by the NIE, to include a study of basic skills of vocational education students.

(6) Analysis of the Federal Legal and Regulatory Framework for Implementation of Vocational Education Legislation, awarded June 1979 to the Lawyers' Committee for Civil Rights under Law, Washington, D.C., for a 28-month study, at a cost of $217,000, including $70,000 contributed by the NIE.

Research projects are also being conducted by the staff of the Vocational Education Study, some with the assistance of consultants and specially commissioned studies. These deal with:

1. Vocational Education in Rural and Sparsely Settled Areas (for which the Institute has contributed additional resources for special studies and a conference);
2. The Effectiveness of Consumer and Homemaking Education Programs (with the assistance of consultants);
3. Vocational Education Programs for the Incarcerated (on which the National Advisory Council on Vocational Education and the National Association of Executive Directors of Vocational Education have provided assistance);
4. Coordination of Vocational Education and Comprehensive Employment and Training Act (CETA) Programs;
5. Basic Skills of Vocational Education Students;
6. Evaluation Issues and Practices in Vocational Education; and

7. Vocational Education in Urban Areas (for which special case studies have been commissioned).

An additional area of work managed intramurally, for which special studies have also been commissioned, consists of analyzing developments likely to affect the shape of policies for vocational education and training in the future. This effort will consider anticipated changes in population, the structure of the economy, technology, and the occupational and other characteristics of the labor force, as well as in other factors. Among the latter are value systems and life styles, the nature of work, performance standards, and educational and noneducational institutions and organizations involved in the acquisition and development of occupational knowledge and skills.

The several separate intra- and extramural research projects are interrelated, complementary, and mutually supportive. In combination, they will throw light on the ways and extent to which the 1976 legislation will have effected changes in the nation's public school vocational education enterprise, on the implementation of policy, and on the relationship between policy goals and program instrumentalities. The interrelated character of the different substudies appears in the fact that several of them, in addition to the one on State and Local Compliance and Evaluation Practices, will provide information on issues of compliance. Among them are the substudies on the Distribution of Funds, Special Needs Populations, and the Analysis of the Federal Legal and Regulatory Framework.

The Study's national coverage and analyses depend upon the use of existing and new data, including those gathered through VEDS and a survey conducted by the Office for Civil Rights. Additional new data and information are being collected for the

Study through field work in selected States and localities. Five States-- California, Florida, Illinois, New York, and Texas--are common to the extramural substudies involving field work, except for the Legal Framework substudy. These five "core" States were selected on the basis of geographic, population, educational, economic, and other criteria. Another six states are common to the Funds Distribution and Compliance and Evaluation Practices substudies--namely, Alabama, Colorado, New Hampshire, North Carolina, Pennsylvania, and Oklahoma. For the Study as a whole, work will be conducted in a total of 29 States, as indicated in Table I-1.

Status of the Extramural Research

The Distribution of Federal, State, and Local Vocational Education Funds substudy (School of Education of the University of California at Berkeley) has three major components: (1) to examine and evaluate existing national data bases; (2) to analyze the funding policies and practices of the States and the actual flow of funds to local education agencies (LEAs) in 15 States; and (3) to examine the distribution and utilization of Federal, State, and local vocational education funds in terms of services, occupations, enrollments, and target populations. Sections of this Interim Report draw upon the completed parts of the first and second components. The remainder of the second component will be completed by December 1980. The report on the third component will be available in January 1981, and the final report on the entire substudy will be submitted in April 1981. The States involved, in addition to the five "core" States, are Alabama, Colorado, Minnesota, New Hampshire, Oklahoma, Pennsylvania, South Carolina, South Dakota, Utah, and Washington.

TABLE I-1

STATES IN WHICH FIVE STUDIES ARE CONDUCTED

Distribution of Vocational Education Funds University of California		Compliance and Evaluation Practices Abt Associates	C&HE Responsiveness CRC	Special Needs A.L. Nellum	Legal Framework Lawyers'Committee
SUBSTUDY B	SUBSTUDY C				
Alabama	*California	Alabama	*California	*California	*California
*California	Colorado	*California	*Florida	*Florida	Indiana
Colorado	*Florida	Colorado	Georgia	*Illinois	North Carolina
*Florida	*Illinois	*Florida	Idaho	*New York	Oklahoma
*Illinois	Kansas	*Illinois	*Illinois	*Texas	
Minnesota	Massachusetts	Indiana	Maine		
New Hampshire	North Carolina	Kentucky	Nebraska		
*New York	*New York	New Hampshire	*New York		
Oklahoma	South Dakota	New Mexico	*Texas		
Pennsylvania	*Texas	*New York	West Virginia		
South Carolina		Oklahoma			
South Dakota		Oregon			
*Texas		Pennsylvania			
Utah		*Texas			
Washington		Wisconsin			

* Core States for first four studies

Total number of States in all five studies: 29

The State and Local Compliance and Evaluation Practices substudy (Abt Associates, Inc.) inquires into State and local behavior in 15 States with respect to compliance with the spirit and letter of Federal legislation and its evaluation requirements. It assesses the effects of the Education Amendments of 1976 in five areas in which the legislation sought to bring improvement: planning, evaluation, funds distribution, equity, and coordination between CETA and vocational education programs. State- and local-level field work on the substudy has been completed in ten States--in Alabama, Indiana, New Hampshire, New Mexico, Wisconsin, and the five "core" States. Field work has been conducted only on the State level in another five States--in Colorado, Kentucky, Oklahoma, Oregon, and Pennsylvania. The findings of some of the field work have been used in preparing this Interim Report. The final report on the substudy will be completed in December 1980.

The Responsiveness of the Consumer and Homemaking Education System at State and Local Levels substudy (CRC Education and Human Development, Inc.) examines the extent to which Consumer and Homemaking Education (C&HE) programs, activities, and services correspond to the objectives of Federal legislation set forth in Section 150 of P.L. 94-482. Thus, it seeks to determine whether those responsible at Federal, State, and local levels for implementing C&HE programs fulfill its intentions with respect to the categories of people being served and the relationship of the instructional programs to national, regional, and local needs. It also inquires into the consequences that the legislation may have for C&HE programs which are not directly federally funded. State- and local-level field work in the "core" States and in Georgia, Idaho, Maine, Nebraska, and West Virginia has been completed. A final report on the substudy is scheduled to be submitted by May 1981.

The substudy on Meeting the Special Needs of Special Groups (A. L. Nellum and Associates, Inc.) seeks to assess how and to what extent the needs for vocational education on the part of special groups identified in Federal legislation are being met. Field work studies in three communities in each of the five "core" States have been conducted, and the final report is due in November 1980.

The substudy on The Effects of Participating in Vocational Education (The Huron Institute) attempts to determine the shorter- and longer-term economic and noneconomic effects of secondary and postsecondary vocational education programs upon participants. Measures of economic effects include employment and unemployment experiences, wage rates, and occupational advancement. Measures of noneconomic effects include further education, job satisfaction, and leadership. The research involves the use of national longitudinal survey data and other sources of information that permit inferences about the economic and noneconomic consequences associated with vocational education programs. A final report on this substudy, certain aspects of which are covered in this Interim Report, is due in February 1981. The task of studying the level of proficiency in basic skills attained by vocational education students, recently added to this substudy, is scheduled to be completed by April 1981.

The substudy on The Analysis of Federal Legal and Regulatory Framework for Implementation of Vocational Education Legislation (Lawyers' Committee for Civil Rights under Law) has two parts. One centers on the legal and regulatory framework for Federal vocational education policy, and the second on the capacity of the Federal government to implement that policy. The first involves an assessment of the Vocational Education Act, as amended (and the relevant regulations), for its consistency, clarity, and comprehensiveness; an inquiry into the degree of congruence between Federal and State interpretations of the legislation and regulations; and an examination of the incentives for compliance and sanctions against noncompliance in the Federal legislation. The second part will investigate the interpretation of the law and its communication to the States by the Bureau of Occupational and Adult Education of the U.S. Office of Education. Final reports are to be submitted in May and June 1981, and some of the preliminary analytical work has been used in preparing sections of this Interim Report.

FOOTNOTES

1. The text of Sec. 523(b) of P.L. 94-482, approved October 12, 1976. as amended by P.L. 84-40, approved June 3, 1977, is reproduced in Appendix A.

2. A substantial number of governmental--Federal, State, and local--and private organizations and officials have contributed services to the Study ranging from the administration of surveys to the provision of data and information.

3. With the creation of the U.S. Department of Education in 1980 and the disappearance of the U.S. Office of Education, this provision in Sec. 523(b)(2) would presumably apply to the Secretary of Education.

4. Published by the U.S. Government Printing Office in 1978 and reprinted the following year.

5. These are Volumes 1 and 2, respectively, of The Planning Papers of the Vocational Education Study, 2 Vols. (Washington, D.C.: U.S. Government Printing Office, 1979).

6. For examples of such studies, see the items listed in Projects in Progress--FY 1978 and Projects in Progress--FY 1979 (Columbus, Ohio: National Center for Research in Vocational Education, 1979 and 1980). The publications are reports for the Coordinating Committee on Research in Vocational Education, established by the Education Amendments of 1976.

7. A seventh small contract, in the amount of less than $44,000, has been completed. The contractor, CRC Education and Human Development, Inc., was charged with reporting on the ability of the States to respond to the evaluation requirements of the 1976 legislation found in Section 112(b)(1).

CHAPTER II. FEDERAL VOCATIONAL EDUCATION LEGISLATION

Federal aid for vocational education in the public secondary schools began with the Smith-Hughes Act of 1917, and grew with successive acts supporting vocational education. Today the Vocational Education Act of 1963 (VEA) as amended is the largest single source of direct Federal assistance for vocational education programs in public secondary schools and postsecondary institutions. In 1977-78 (FY 1978) Federal expenditures under the Act were $495 million, most of which was distributed by the States and territories to secondary and postsecondary education agencies and other eligible recipients. In addition, as discussed in Chapter VI, vocational education programs receive Federal funds through other education programs (such as the Adult Education Act); economic development programs (such as the Appalachian Regional Development Act); and related employment programs, especially the Comprehensive Employment and Training Act (CETA).

This chapter of the Interim Report treats the development of Federal legislation concerned directly with secondary and postsecondary vocational education. The first section describes the requirements and objectives of vocational education legislation as they developed up to 1976. The second section discusses the provisions and changes introduced by the Education Amendments of 1976, some of whose major effects are analyzed in the following chapters.

The Development of Federal Vocational Education Legislation: Origins and Continuities

The history of Federal vocational legislation is generally divided into two phases marked by the passage of, respectively, the Smith-Hughes Act of 1917, and the Vocational Education Act of 1963. There are major continuities between the two periods; but the 1963 Act marked the introduction into Federal vocational education policy of important new economic and social objectives.

Federal vocational education dollars have been and are used essentially to help pay for educational programs preparing students directly for entry into the labor force. The Federal government never has provided a large share of the total expenditures for public vocational education. Its share has been decreasing over time, and in 1978 the VEA only provided about nine percent of the total reported public vocational education expenditures.

Federal grants to the States have always been matching grants, so that each State must spend State and/or local funds in order to receive its Federal funds. In addition, Federal legislation always has included targeting and planning requirements designed both to insure that Federal funds were used to advance specific Federal goals and to affect and/or redirect State and local efforts. This pattern, and the enormous variation in the scale of State and local activities, means that Federal dollars have been more important for particular aspects of vocational education than overall funding levels would suggest.

The Smith-Hughes Act

In the early years of this century, the United States had become a major industrial rather than an agricultural nation, and one which was experiencing enormous immigration of poor and largely uneducated people.[1] This situation focused attention on the education being given to the future labor force and reformers argued that the expanding secondary schools were concentrating too narrowly on traditional academic subjects. Manual training was merely a "sort of mustard relish conducted without reference to any industrial end."[2]

By 1910, twenty-nine States had established some form of vocational program in their public schools,[3] but enthusiasts for vocational education believed Federal funding could provide vital assistance in making them a permanent and integral part of public education. Their vehicle was the National Society for the Promotion of Industrial Education (NSPIE), which enlisted support from business, agriculture, labor, and educators[4] in lobbying for Federal aid. The Smith-Hughes Act was in very large part its achievement.

This "Act to provide for the promotion of vocational education" was "especially designed to prepare workers for the more common occupations in which the great mass of our people find useful employment"[5] and authorized funds for teachers' salaries and teacher training. Money was allotted to the States on the basis of population ratios, and divided into separate allocations for agricultural subjects; trade, home economics, and industrial subjects; and teacher training programs[6] in these areas. Funds could be used only for teachers' salaries and training and requirements extended to program format. For example, the law specified[7] the minimum number of hours per week and per year to be spent in instruction and that half of the time in trade, industrial, and agricultural programs was to be spent in practical work "on a useful or productive basis." Under the Act, States were required, as they still are today, to designate a State board responsible for vocational education administration, and also to submit plans for vocational education programs to an independent Federal Board for Vocational Education in order to be awarded grants. In 1933, the Board's functions were transferred to the U.S. Office of Education, but it continued to exist as an advisory body until 1946.

The key features of the Smith-Hughes Act persisted until 1963,[8] even though intermediate legislation[9] expanded (1) the purposes, such as administration, guidance, construction of area schools and equipment and (2) the occupational fields--distributive,[10] and fishing trades, and practical nursing--for which Federal monies could be used. Federal funding for vocational education under these Acts also became fairly stable, growing little during the 1950s,[11] and declining as a share of total expenditures.[12]

The Modification and Growth of Federal Objectives for Vocational Education

In the late 1950's and early 1960's, unemployment and particularly youth unemployment were rising, unskilled jobs were declining as a proportion of the whole, and there were fears that "automation," combined with the baby boom and the increasing number of working women, would produce an economy whose decreasing numbers of low-skill jobs were under increased pressure from applicants.

These concerns led to a major expansion in American employment policies, with the Federal government for the first time providing direct support for occupational training programs and subsidies to employees and trainees.[13] The Area Redevelopment Act, the Trade Expansion Act and, most important, the Manpower Development and Training Act (MDTA) were all passed in 1961-62. At first, large amounts of MDTA funds were used for vocational programs in educational institutions, but later in the decade, the Federal government turned increasingly to on-the-job training and work experience programs as a way of tackling youth unemployment. A large proportion of CETA funds are used in this way; and the Youth Employment and Demonstration Projects Act of 1977 also attempts to reduce youth unemployment through out-of-school job programs.

The same economic and social concerns that produced MDTA and succeeding youth training programs also underlay the passing of the 1963 Vocational Education Act and the 1968 Education Amendments. Together, they introduced major changes in vocational education policy and were accompanied by a significant rise in the level of Federal appropriations.[14] The Kennedy administration, with ambitious plans for Federal education policy, appointed a Panel of Consultants on Vocational Education to conduct a major reappraisal of vocational education "in terms of the extraordinary developments in technology, and in terms of a variety of social and economic needs." In the then-existing atmosphere of support for expanded vocational training, many of the recommendations made by the Panel in its 1963 report were incorporated[15] into the legislation of that year.

The same was true for the similar recommendations made prior to the 1968 Amendments by the Advisory Council on Vocational Education.[16] The result was legislation in which continued support for a general secondary-level vocational education program was modified by directing funds towards or mandating services for particular "high-need" groups and areas; increased emphasis on planning requirements intended to encourage responsiveness to local conditions; stronger encouragement of new programs; and funding for postsecondary and retraining programs.

The focus on special needs. The basic vocational curriculum had always been aimed at a fairly large proportion of the secondary school population. In the early days, its champions in the National Association of Manufacturers saw it as designed for the "concrete, or handminded children . . . who can only with extreme difficulty, and then imperfectly, learn from the abstractions of the printed page." These hand-minded children, however, consisted of "one-half of the youth of the land."[17]

In the 1950's and early 1960's, however, there was increasing concern over the skills and employment prospects of more narrowly defined groups within the population. The economic and urban problems of the period, and the support of social reform, led to a new emphasis on providing special help to the disadvantaged and handicapped. This was continued and strengthened in the late 1960's and the 1970's.

One of the advocates of this development was the Panel of Consultants appointed by President Kennedy. The Panel argued that youths with "special needs" were being inadequately served by the current system, and defined this group as the "potential dropouts, disinterested, reluctant, disadvantaged, alienated, or culturally deprived . . . the minorities, the migrants, the mentally retarded, the emotionally disturbed, and the delinquent . . . [those whose] strength is not in the symbolic or abstract."[18] The 1963 Act in turn specified that one of its purposes was to assist those with "special educational handicaps" and that funds could be used for special programs for persons with "academic, socioeconomic or other handicaps."

Both in 1963 and, more markedly, in 1968, specific provisions were also introduced to this end. The 1963 Act introduced new State grants, additional to the Smith-Hughes grants, based on population and incorporated per capita income into the formula used to adjust State allocations. It thus marked a decisive shift from the old pattern of allocating funds on the basis of States' rural/farm/urban population to one of using overall population counts and a general economic criterion. The 1968 Amendments, which folded Smith-Hughes appropriations into the new basic grants, also further instructed States to give "due consideration" in their allocations to handicapped persons, to economically depressed and high unemployment areas, to relative wealth of recipients, and to the relative costs of recipients' programs. In addition, they:

1) set aside 15 percent of each State's allotment for programs for persons with academic, socio-economic

and other handicaps (the "disadvantaged" set aside);

2) set aside 10 percent of each State's allotment for programs for those with physical or emotional handicaps (the "handicapped" set aside);
3) set aside 1/3 of each State's separate allocation for consumer and homemaking education programs for economically depressed areas; and
4) continued specialized programs, set up in 1963, for residential schools and for work-study programs in areas with high dropout or youth unemployment rates, and for research and experimental programs focused on disadvantaged youth.

An additional "high-need" group was given special funding in 1972 with the addition of a separate appropriation for bilingual programs.

To allow for special training, the 1963 Act broadened the definition of vocational education to include "instruction related to the occupation for which the student is being trained, necessary for him to benefit from such training."[19] The extension of permissable courses was made more explicit in 1968, when support was allowed for "remedial or related academic and technical instruction incident"[20] to training or retraining programs. This extension recognized the argument that young people's employment prospects and, conversely, the very high youth unemployment rates found for some areas and groups, were related to levels of basic academic skills. It was argued that without these, they could not learn on the job, and that employers' needs were as much or more for these as for skills related to specific occupations.

While the current Administration's Youth Initiative encourages basic education programs for their presumed employment effects, Vocational Education Act funds have continued to be directed largely to programs designed to teach specifically vocational skills, and only incidentally to the training-related remedial programs authorized in 1968. However, evidence is available on the related question of whether vocational programs are themselves a good way to teach basic skills; this is treated in Chapter VII.

The shift from programmatic funding to general planning provisions. The move away from the allocation of funds for particular programs of vocational instruction also began in 1963. The Smith-Hughes Act categories, with their detailed requirements for program format, had been critized for many years for the inflexible pattern of programming they imposed.[21] Although later Acts were somewhat more permissive about the way in which funds could be used, the major legislative changes had been to authorize additional expenditures for training for additional occupations.[22] The allocation by programs remained. Meanwhile, the distribution of jobs and federally-funded vocational programs diverged. In 1920, 25 percent of workers were employed in agriculture, and in 1960, it was only 8 percent.[23] In 1920, 55 percent of the students in federally-funded vocational education were in agriculture courses and in 1960-61, 24.8 percent of the high school youth in federally-reimbursed programs still were enrolled in agriculture courses.[24]

The increasing complexity and pace of change of the job market, and its marked local variations, made Federal requirements for the nature and format of programs appear increasingly impractical and counterproductive. The Kennedy Panel of Consultants recommended grants for States to allocate among different types of training programs as they saw fit; and in 1963 a new program of grants was introduced, separate from and additional to the existing programmatic grants. Funds from these could be used for programs, construction, or auxiliary services. In 1968, funding under the Smith-Hughes Act was incorporated into the consolidated grant program,[25] although a separate appropriation for home economics ("consumer and homemaking education programs") was retained. By 1976 the only Federal funds being allocated to programs with specified subject matter were for consumer and homemaking education and bilingual programs. Otherwise, States were to adapt and relate programs to local conditions.

Accompanying this shift was an increased emphasis on State plans[26] as a way of implementing and monitoring progress toward Federal goals. While some sort of plan describing the proposed uses of Federal allocations had always been required, the planning provisions introduced in 1963 and extended in 1968 were far more prescriptive. States must now show how the uses of State and local as well as Federal funds were related to the purposes set out in the Vocational Education Act,[27] and how the employment needs and the educational needs of all communities were being taken into account. The objective was to use Federal funds as a means of improving the vocational education enterprise as a whole, and making it more coordinated and related to local social and economic conditions.

New programs and research. Federal legislation, since 1963, has also incorporated a number of directives intended to increase the responsiveness of vocational programs to technological and economic change. A major criticism of the old arrangements had been that Federal funds simply were subsidizing existing and unchanging programs rather than stimulating State and local improvements.[28] In an attempt to encourage general change through the mechanism of Federal grants, the new planning provisions required States to show that the allocations took account of evaluations and projected employment needs[29] and that research and development were being emphasized.[30] In addition, specific set asides were made from Federal funds to support research, experimental programs, and dissemination;[31]

and separate appropriations made for "exemplary programs and projects," "curriculum development in vocational and technical education," and "vocational education leadership and professional development."[32]

Postsecondary and retraining programs. The 1963 Act also encouraged the expansion of postsecondary vocational education. Increasing numbers of skilled manual and technical jobs were requiring longer postsecondary training, while at the same time. the increasing pace of technological change meant that skills and even occupations rapidly were becoming obsolete. Many States were developing systems of postsecondary vocational education in response, and the first recognition of these changes in Federal education policy came with the National Defense Education Act of 1958. This measure provided funds for the construction of vocational education centers in areas inadequately served, and for vocational schools for highly skilled technicians.[33]

The 1963 Vocational Education Act stipulated that, at a minimum, a third of the new basic grants was to be used for postsecondary courses or for constructing area facilities, or both; and authorized the use of Federal money for retraining. This encouragement of postsecondary programs was in direct contrast to previous Federal policy which had stipulated that funds might be spent only on programs for those about to enter, or already in, the labor market. The authorization of retraining programs also contrasted with the old conception of training for a lifelong occupation. The emphasis was further strengthened in 1968, when at least 15 percent of each State's basic allotments (now including the old Smith-Hughes appropriations) was set aside for those who "have completed or left high school and who are available for study in preparation for entering the labor market"--i.e., for postsecondary education.[34]

In short, prior to the Education Amendments of 1976, Federal legislation provided funds to the States to assist them with providing a wide range of secondary and postsecondary vocational education programs, and with providing services to particular target populations such as the disadvantaged and the handicapped. The States were also instructed to give consideration to the relative wealth of the recipients, the particular needs of the populations served, and the costs of programs when distributing funds, and to give priority to programs in economically depressed areas. In addition, the States were allotted funds for nine categorical programs, each with its own particular objectives and instructions for allocation. They were: consumer and homemaking education programs; residential vocational schools; work-study programs; exemplary programs; research and training; educational leadership; curriculum development; cooperative education; and bilingual programs.

To achieve the government's expanded objectives, the program relied on fiscal controls and planning requirements. Fiscal control was sought through the separate appropriations for the nine categorical programs, by setting aside funds for target populations, and by the directive to States to distribute funds with respect to indicators of need. In addition, there were requirements[35] that States match Federal funds with State and local money, maintain their fiscal effort from year to year, and use Federal money to supplement, not supplant, their own. The plans which States were required to submit were to describe their activities and how they related to legislative provisions and intent, not only for Federal funds but also for State and local funds.

The Education Amendments of 1976

The Vocational Education Act as currently constituted is essentially the product of the 1976 Education Amendments. The Congressional hearings and deliberations which preceded passage of the legislation did not result in any major changes in the goals of Federal policy; rather, emphases on high-need populations, comprehensive planning in response to local conditions, new programs, and postsecondary as well as secondary programs were retained. Another equity objective was added--that of reducing sex bias and sex-role stereotyping. What were altered were the mechanisms employed to further and enforce Federal goals.

A number of reports[36] published shortly before the 1976 reauthorization had been extremely critical of the way in which the vocational education system was working. From these, and especially that of the General Accounting Office (GAO) and from substantiating testimony, Congress formed the impression of an entrenched enterprise, resistant to change, and of Federal monitors in collaboration with the States. Failures to achieve Federal objectives were seen as resulting from failures in administration and monitoring, and consequently both Houses of Congress moved to strengthen implementation and control mechanisms, and to tighten the relationship between Federal objectives and legislative provisions.

The resulting Act, which combined provisions from House and Senate bills, is a complex piece of legislation, reflecting the multiple goals of Federal policy and different approaches to implementation and control. The Act, as amended in 1976, consists of three parts: Part A, which covers State Vocational Education Programs and accounts for the greater share of the funds; Part B, which covers National Programs; and Part C, which defines the critical terms of the legislation. The components of the first two parts are shown below in II-1.[37]

II-1: THE VOCATIONAL EDUCATION ACT

Part A--State Vocational Education Programs
- Declaration of Purpose (Sec. 101)
- Subpart 1--General Provisions (Sec. 102-112)
- Subpart 2--Basic Grant (Sec. 120-124)
- Subpart 3--Program Improvement and Supportive Services (Sec. 130-136)
- Subpart 4--Special Programs for Disadvantaged (Sec. 140)
- Subpart 5--Consumer and Homemaking Education Programs (Sec. 150)

Part B--National Programs
- Subpart 1--General Provisions (Sec. 160-162)
- Subpart 2--Programs of National Significance (Sec. 171-172)
- Subpart 3--Bilingual Vocational Training (Sec. 181-189)
- Subpart 4--Emergency Assistance for Remodeling and Renovation of Vocational Education Facilities (Sec. 192-194)

Origins of the 1976 Provisions

The major instruments used by Congress to implement Federal goals for vocational education are funding and planning requirements. Reports and hearings indicated that neither was having the effects that Congress envisioned and also convinced the Congress that new measures would be needed to counter sex bias.

Mismatch between funding practices and Congressional priorities. Congress had intended that Federal funds be used especially for specific types of programs and populations, to further the goals developed during the 1960's. Instead, the GAO report[38] indicated that funds were often providing general support for local programs. Congress was informed, for example, that in many States funds were being distributed on a flat formula basis to all local education agencies (LEAs); that LEAs' resources and requirements were often not taken into account; that student enrollment was sometimes the sole allocation criterion; and that Federal funds were consequently not going to areas of highest need, as the legislation intended.[39] Congress also heard from witnesses that postsecondary institutions were not receiving funds commensurate with their relative enrollments. The GAO indicated that Vocational Education Act dollars were generally not providing support for new program development,[40] and the study of employment data argued that course enrollments did not, on the whole, correspond to job availability, and changing manpower needs often were not reflected in changing programs.[41]

Planning deficiencies. The findings on funds allocation confirmed the reports being made to Congress of serious problems with the planning process through which funding decisions were made. Meaningful planning was not occurring; the right people were not being involved; nor were the right data being used. The Senate Report notes that:

> It was repeatedly stressed to the Committee that the (plan) submitted by the States was not a planning document, but rather was a "compliance" document . . . (and) useful to no one, in most cases.[42]

Congress heard recurring complaints that there was no coordination in planning between State boards of vocational education and State higher education agencies, or between either of these groups and the State employment and training agencies. A study for the House Committee found that in thirteen States, postsecondary institutions had no input into State vocational education planning at all,[43] while in only fourteen was their participation mandatory under State law. The GAO reported frequent secondary/postsecondary overlap, related to lack of joint planning. At the same time, State employment and vocational agencies generally neither helped prepare nor reviewed each other's plans in spite of the importance of CETA programs for vocational education.[44]

With respect to data, Congress took note of the North Carolina study's conclusion that no adequate employment demand data were available for use in planning and updating programs; that there were also no good evaluative data showing the extent to which vocational students obtained employment in areas related to their training; and that current planning processes were not set up to respond to such information.[45] The National Academy of Science's contention that present research did not provide results of direct relevance and use in program planning and design strengthened Congress' concern with data availability.[46]

Sex equity. During hearings, both the House and the Senate were presented with evidence and reports indicating sex bias and sex stereotyping in curriculum, counseling, and attitudes of teachers in vocational education. Both Houses were determined to use Federal legislation as an instrument of general change in the system. Indeed, the House held separate hearings on the topic and viewed it as a problem of such magnitude as to list it, along with increased funding and better planning, as one of the three major improvements needed in vocational education.[47]

Areas of Change

In response to these problems, both the House and Senate committees concerned with vocational education prepared bills involving major changes in vocational education legislation. Large sections of each were incorporated into the final Act (P. L. 94-482). As noted above, apart from the introduction of sex equity as a goal, the major changes were in the methods to be used in implementing Federal objectives rather than in policy objectives. They involved (1) funds distribution requirements to increase targeting to special high-need areas; (2) distribution requirements to further the goal of supporting new programs; (3) planning, evaluation, and accountability requirements intended to encourage "improved broad-based planning"[48] and its responsiveness to local manpower needs; (4) consolidation measures intended to increase States' planning feasibility; (5) measures to reduce sex bias and sex-role stereotyping; and (6) strengthened oversight and enforcement at the Federal level.

Funds distribution: formula changes, set asides, and administrative expenditures. Among the most important provisions of the 1976 Amendments are those introducing new and more prescriptive requirements for the distribution of funds by States to LEAs and other eligible recipients. These are drawn from both House and Senate bills and intended to increase the targeting of Federal funds in accordance with Federal objectives. They replace the old general directive to allocate funds with due consideration to LEAs' disadvantaged and handicapped populations, and their economic and employment situation.

The Congress had been presented with evidence suggesting that this directive had been ineffective, and both Houses proposed separate and different replacements. The House concluded that existing legislation was "too general in nature to carry out the intention of Congress which was to provide additional resources to those school districts and agencies most in need of those resources to provide programs . . . and we must accordingly modify the law to make it more specific.[49] The House bill proposed that two factors should be the *most important determinants of how much Federal money a State allocated* to a recipient--namely, for school districts:[50]

(1) the financial ability of these districts and

(2) the number or concentration of low-income families or individuals within them;

and for other eligible recipients:

(1) the financial ability of such agencies and

(2) the number or concentration of students whom they serve whose education imposes higher than average costs. (Sec. 106(a)(5)(B)).

The Senate noted that ". . . a number of States allocate funds among school districts on the basis of a flat formula, without taking relative need or ability to pay into account. The Committee bill therefore seeks to spell out (the funding) requirement in even more explicit terms."[51] The Senate bill provided for States to give priority in approving applications for Federal funds to those applicants proposing programs:

(1) for persons with "special needs" including " academic, socioeconomic, mental and physical handicaps;"

(2) located in economically depressed areas and areas of high rates of unemployment, where resources to meet vocational education needs cannot be met without Federal assistance;

(3) programs new to the area and designed to meet new and emerging manpower needs and job opportunities.

Both the House and Senate were concerned with increasing the share of Federal funds for certain groups and areas, and the final Act combined provisions proposed by each on the grounds that "these provisions propose similar changes."[52] However, while there are similarities and shared concerns underlying the two sets of criteria, the differences between them, and uncertainties about how to combine the requirements for giving priority to applicants with those requirements affecting distribution of funds, have made the new provisions a continuing source of problems and State complaints. Chapter III analyzes, in detail, the provisions and their implementation.

Set asides and matching requirements. Before the introduction of the funding provisions just described, the strongest mechanism for targeting money to special groups and areas was that of the set aside. At the same time as strengthening the general targeting provisions to help serve these groups, the legislation raised the disadvantaged set aside from 15 to 20 percent. In addition, a new provision required that the same percentage of this set aside should be used for limited English-speaking populations as the percentage of the State population aged 15-24 falling in this category.

The Act also introduced separate matching requirements for each of the set asides, once again with the intent of using Federal funds and leverage to obtain a much stronger commitment of effort to these groups. Pre-existing legislation had merely required that set aside funds be spent on these populations, but the 1976 Amendments state that they are to be used to pay up to 50 percent of the costs of these particular programs. Draft regulations stating that agencies could match against total program costs prompted a letter from the chairmen and ranking members of the Senate and House Committees[53] stating that the intent was that the costs should be excess costs only: that is, that Federal funds should pay 50 percent of the additional costs incurred because of students' special needs. After Federal regulations to this effect evoked widespread complaints that many target areas were too poor to match funds at this level, the Technical Amendments passed in 1979 further instructed the Commissioner of Education to allow eligible recipients otherwise unable to provide these services to use Federal funds for more than 50 percent of excess costs. However, even as now amended, these provisions involve detailed matching requirements at a State or local level of a type new to vocational education. Their implementation is examined in further detail in Chapter III.

Limits on rate of administrative expenditures. The GAO reported that large amounts were being spent on State administration and that the share of Federal support for administration was greater than its share of State programs and recommended that limits be placed on how much money could be so used. Amid concern that this was directing money away from Federal goals, the 1976 Amendments introduced matching requirements under which States must themselves, from the third year on, provide 50 percent of the cost of administering Federal programs.

In addition to these changes[54] the Act retains a number of other pre-existing fiscal requirements so that the relatively small Federal share of total vocational education expenditures now comes attached to a long list of funding restrictions and requirements. Chapter III discusses these in detail and, in particular, preliminary findings on the effect on the vocational education system of the new 1976 provisions.

Program extension and improvement, and the establishment of new programs. From 1963 on, Federal vocational education legislation has been intended to encourage the use of Federal funds to update programs, and make them more responsive to changing job needs. However, only with the appropriations for research and exemplary programs was any definite requirement to use funds for this end incorporated into the statute. By 1976, the Senate, in particular, was very concerned that the Federal role of promoting expansion and innovation was not being realized. As noted earlier, the North Carolina study of employment data had criticized the absence of adequate employment data for use in program planning; and GAO representatives in their testimony criticized some States' use of Federal funds simply to maintain existing programs.[55]

The Senate engaged in considerable discussion over whether Federal funds should only be used for expansion and innovation. In the end the use of Federal funds to maintain on-going programs was accepted. However, the Act's Statement of Purpose was amended to state that the purposes of Federal funds are to "extend, improve, and, where necessary, maintain"[56] programs instead of "to maintain, extend and improve"[57] them. Similarly, the Conference Report "stresses the use of Federal funds as a catalyst for development of new programs."[58]

The most important provision embodying this emphasis is one already noted: the inclusion, from the Senate bill, of the requirement that funding priority be given to applicants proposing new programs. In addition, the Act established National and State Occupational Information Coordinating Committees (NOICC and SOICCs) to set up systems of occupational information for use in vocational education planning. The effects of this provision are discussed in Chapter IV.

Planning and evaluation requirements. Since the repeal of the restrictive Smith-Hughes provisions affecting program content and format, Federal vocational policy has relied heavily on State plans as a way of introducing Federal priorities into vocational education. Since they deal with State and local funds as well as Federal, they have been seen both as a way of monitoring the implementation of Federal goals, and as a means of encouraging States to incorporate these goals into State-wide planning and of improving the general management of vocational education. However, in 1976, Congress heard repeated criticisms of the planning process, and, in particular, of coordination among the parties involved and of the use of current data. The 1976 Amendments consequently incorporated a number of provisions intended to improve planning and evaluation procedures.

Both Houses moved to improve the decision-making process and increase coordination, but did so in different ways. The Senate proposed detailed changes emphasizing "participatory" decision-making. Its bill would have established State planning commissions for vocational education, with mandatory membership requirements involving the representation of ten separate interest groups. It also extended and redefined the membership requirements for the State Advisory Councils which must advise on the State plan, so as to include 18 separate categories, including members with, for example, knowledge or experience of women's problems, the disadvantaged, and the handicapped. The House, by contrast, preferred to leave the responsibility for planning with the State Board for Vocational Education; but its bill required involvement of other agencies, and especially the State Manpower Services Council concerned with CETA. The House also extended SACVE membership requirements, though to a lesser degree.

The final Act reflects a compromise. The Senate receded to the House in leaving final authority for planning with the State board. However, the ten groups proposed for the Planning Commissions remain enumerated in the legislation, and must be actively involved in the planning process. Differences in requirements for SACVE membership were resolved by combining both Houses' provisions so that the 1976 Act stipulated 20 membership categories compared to 9 in 1968.

Congress was also determined to improve the degree to which planning was informed by relevant data. The House was particularly concerned with a problem which it saw as, in large part, the responsibility of Federal administrators,[59] and one of the steps taken by the House bill, and the final Act, to remedy the situation was the establishment of a National Vocational Education Data Reporting and Accounting System (VEDS).[60] In addition, the House proposed two steps intended to incorporate up-to-date employment data directly into planning at the State level. First, it required that there be established the National Occupational Information Coordinating Committee, and the individual State Occupational Information Coordinating Committees. These were ". . . to improve the planning and operation of vocational education and manpower programs,"[61] and to foster their coordination.

Second, it established new evaluation requirements. States were instructed to evaluate every program being assisted with Federal funds at least once every five years, and use the results to revise programs and to conduct the evaluations directly in terms of job placement rates and employers' opinions of program graduates. Both the data collection and the evaluation provisions were incorporated into the final Act, and their effects are discussed in Chapter V. Also included were the Senate's provision for regular Federal evaluations of States' programs, and provisions designed to ensure the financial and administrative independence of the State Advisory Councils, and so increase the importance of their evaluative function and annual evaluation report.[62]

Finally, both Houses redrafted the general planning requirements with a view to replacing the "mound of paper"[63] submitted for compliance purposes with a document reflecting and contributing to a "comprehensive" and "long-range" planning process.[64] In particular, both set out to reduce the amount of paperwork submitted annually, as opposed to a long-range plan submitted at less frequent intervals. The final Act requires a five-year State plan, plus an annual plan, and also sets forth detailed requirements for each.

Taken together, these changes involve a considerable increase in the control which the Federal government attempts to exert over the planning process, planning which, it should be emphasized, involves Federal, State, and local vocational education funds,[65] not Federal funds alone. The changes also represent an affirmation of trust in the Federal government's ability to affect the substantive nature of programs through "process," planning, and evaluation requirements. Chapter IV describes these requirements and reports preliminary findings on their effects.

Consolidation. The legislation of 1963 and 1968 had created consolidated basic grants to the States in order to promote a system of vocational education responsive to changing and local needs. But at the same time, since 1963, an increasing number of small programs for special purposes had been added to the legislation. By 1976, there were nine separate categorical programs, each with its own matching requirements, covering such diverse topics as cooperative vocational education, residential schools, curriculum development, and research and training. In the interest of simplifying administration and facilitating State and local planning, the House proposed that these programs be consolidated, and this was accepted in Conference with the Senate provision that 20 percent of funds were to be used for program improvement and supportive services,[66] and that some of these funds must be set aside for guidance. The 1976 Act consequently creates a subpart (Subpart 3) of the general provisions for "program improvement and supportive services."[67]

Research, exemplary projects, and curriculum development were important categories consolidated. In consolidating, the House was attentive to a report by the National Academy of Sciences and other testimony showing that the separate programs were too frequently operated in isolation, without any links from research to demonstration to implementation.[68] The National Academy also found that at the State level the only places where there was a linkage between research and demonstration were in States in which both programs were administered by the research coordinating unit. The House responded to this finding by centering all program improvement activities in the research coordinating units.

Changes to reduce sex bias and sex stereotyping. In 1976, both the House and the Senate devoted considerable attention to the presence of sex bias and sex-role stereotyping in vocational education. In so doing, both were responding to the well-organized and well-presented testimony of the womens' groups. The House held separate hearings on the issue, and heard evidence presented on the disparity between men's and women's average salaries, and the concentration of women in a limited number of low-paying occupations. The conclusion drawn by witnesses and committee alike was that women must seek nontraditional employment if they want higher wages; while at the same time, vocational programs were seen as reinforcing traditional practices.[69] So critical did the House consider this problem that its report listed elimination of sex bias and sex-role stereotyping as one of three major improvements needed.[70] The Declaration of Purpose in the Act, which draws from both House and Senate bills, was rewritten to include the elimination of sex-role discrimination and stereotyping as one of the Act's four major purposes.

A concern for sex bias and sex-role stereotyping appears throughout the Act in a number of ways, some originating in the House and some in the Senate bill. The most prominent provision, and the only one involving mandatory expenditures, reserves $50,000 for "such full-time personnel as may be needed" to carry out the sex bias-related provisions of the Act. The tasks in which the sex equity coordinators (as they are usually called) must assist are, however, formidable. The legislation provides[71] a detailed nine-part job description, including, for example: reviewing all vocational education programs in the State for sex bias; and assisting local education agencies and other interested parties in the State in improving vocational education opportunities for women.

In addition, the Act mandates programs for displaced homemakers[72] and women wishing to enter traditionally male fields, and contains provisions requiring or encouraging States to address the issue of sex equity in vocational education. For example, States' plans must include, and are reviewed for, policies and procedures to eliminate sex bias. New advisory council membership categories include women with experience or knowledge of job discrimination.

The sex equity provisions introduced in 1976 are a departure from traditional Federal vocational education policy, in that they seek to alter, rather than respond to changes in, the labor market. NIE's Final Report will discuss their effects on the system, at the same time as reporting on the other older "equity-related" aspects of the Vocational Education Act which provide for set-aside funds to be used directly for programs for disadvantaged, handicapped, and bilingual students.

Strengthened oversight and enforcement at the Federal level. In addition to introducing changes intended to further particular Federal goals at State and local levels, the 1976 Amendments also contained provisions designed to strengthen general Federal oversight. The GAO report had concluded that there had been little analysis by Federal officials of the way in which States spend Federal funds. It found that the review of State plans consisted merely of checking for the statements of assurances required by the Act, rather than determining whether Federal funds have been spent according to the State's own plan or legislative intent. Based on this report and other testimony, the House concluded that:

> It seems what is occurring now is that the Office of Education is demanding a great deal of paperwork and detailed data from States and local school districts but then there is no follow-up to determine whether States are complying with the law and no efforts are being made to assist the States in operating their programs better. In other words, a blind concentration on seeking compliance on paper with the process

> has led to a total neglect of trying to seek the results the process was created to achieve.[73]

This behavior, it added, was "slovenly and irresponsible."[74]

Both the House and Senate bills incorporated administrative reforms, and the Act once again combined the major requirements of each. The House had concluded that the two reasons for the existing situation were that Federal officials did not believe they had the authority to monitor the States effectively, and that staffing was inadequate. It therefore moved to give BOAE precise authority and instructions, as well as more staff. At the same time, the Senate bill also gave more exact instructions concerning the procedures to be followed by Federal officials to ensure State compliance.

As a result, States must now submit yearly accountability reports which are designed to increase Federal monitoring ability by describing precisely how all Federal dollars are allocated. Annual plans also give complete data on planned uses and distribution of funds to recipients for use and comparison by monitors. The Commissioner of Education must review all plans and accountability reports for compliance and make specific findings in writing, as well as providing each State with the yearly evaluation, or "quality review" mentioned in discussing the new planning and evaluation requirements. Ten States a year must, in addition, have a fiscal audit, and be reviewed by the Bureau (now Office) of Occupational and Adult Education for program strengths and weaknesses, through a Management and Evaluation Review for Compliance and Quality (MERC/Q). In discussing findings to date on the effects of the 1976 funds distribution, planning, and evaluation provisions, this report will also be describing how these oversight provisions have been implemented.

FOOTNOTES

1. Marvin Lazerson, *Origins of the Urban School: Public Education in Massachusetts 1870-1915* (Cambridge, Mass.: Harvard University Press, 1971).

2. Report of the Massachusetts Commission on Industrial and Technical Education (The Douglas Commission). Quoted in Marvin Lazerson and W. Norton Grubb, ed., *American Education and Vocationalism, A Documentary History 1870-1970* (New York: Columbia University, Teachers College, 1974).

3. Lazerson and Grubb, *op. cit.*, p. 27.

4. Including the National Association of Manufacturers; the American Federation of Labor, and the Association of American Agricultural Colleges and Experimental Stations. See Melvin L. Barlow, *History of Industrial Education in the United States* (Peoria, Illinois: Chas. A. Bennett & Co., Inc. 1967), and Elinor Woods and Walt Haney, "The Effects of Vocational Education: Proposed Propositions and Framework for Study" (Cambridge: The Huron Institute, 1979). (Mimeographed.)

5. U.S. Congress, House, *Report to accompany House Bill 11250, House Report No. 181*, 1916, p.1. Quoted in Barlow, *op. cit.*

6. Public Law 64-347, Sections 2, 3, & 4.

7. Public Law 64-347, Secs. 10 and 11; e.g., agriculture was to include six months supervised practice, trade and industry at least 30 hours of instruction a week.

8. Its "grant in perpetuity" to the States remains a formal part of Federal appropriations (P. L. 90-576, Table I, Section 104).

9. The George-Reed Act of 1929, the George-Deen Act of 1936, and the George-Barden Act of 1946.

10. For example, marketing and retail sales.

11. Federal expenditures were $27 million in 1950, $25 million in 1954, $39 million in 1958. Reported State and local expenditures for those years were $103 million, $126 million and $171 million. U.S. Bureau of the Census, *Historical Statistics of the United States: Colonial Times to 1970* (Washington, D.C.: U.S. Government Printing Office, 1975), p. 378.

12. The major source of additional funding in this period was the National Defense Education Act (NDEA).

13. Lloyd Ulman, "The Uses and Limits of Manpower Policy," in *The Great Society: Lessons for the Future*, eds. Eli Ginzberg and Robert M. Solow (New York: Basic Books), 1974.

14. From $55 million in 1962-3 to $234 million in 1965-6.

15. Panel of Consultants on Vocational Education, *Education for a Changing World of Work* (Washington, D.C.: U.S. Government Printing Office, 1963).

16. Advisory Council on Vocational Education. *Vocational Education: The Bridge between Man and His Work* (Washington, D.C.: U.S. Government Printing Office, 1968). The report was mandated by the 1968 Act.

17. Report of the Committee on Industrial Education of the National Association of Manufactors in 1912. Reprinted in Lazerson and Grubb, *op. cit.*

18. Panel of Consultants on Vocational Education, *op. cit.*, pp. 159-60.

19. Public Law 210, Part A, Section 8(1).

20. Public Law 90-576, Section 108(1).

21. Larry Cuban, "The Politics and Implementation of Federal Legislation on Vocational Education," paper prepared for the Conference on the History of Education and Work, Stanford University, August 1979.

22. The George-Dean Act of 1936 added distributive education and The George-Barden Act (Title II in 1956) added nursing.

23. *Historical Statistics of the United States*, *op. cit.*, p. 127.

24. Panel of Consultants on Vocational Education, *op. cit.*, p. 47.

25. The George-Burden Act was repealed.

26. Public Law 88-210, Section 5.

27. Including retraining and programs for the handicapped.

28. Larry Cuban, *op. cit.*

29. Public Law 88-210, Section 5(a)(2).

30. Public Law 90-576, Section 10.

31. Public Law 90-576, Title I.

32. Public Law 90-576, Title I, Parts D and I, and Title II.

33. NDEA was later amended so that this part became Title III of the George-Barden Act which in turn was incorporated into the 1963 Vocational Education Act.

34. The precise requirement was that 15 percent of the basic allotment under Section 102(a) or 25 percent of the allotment over the base (minimum) allotment was to be set aside. In practice, the 15 percent figure was the one used and referred to.

35. See Chapter III.

36. U.S. General Accounting Office, *What is the Role of the Federal Assistance for Vocational Education? Report of the Comptroller General to Congress* (Washington, D.C.: U.S. Government Printing Office, 1974); D. W. Drewes and D. C. Katz, *Manpower Data and Vocational Education: A National Study of Availability and Use* (Raleigh, N.C.: North Carolina State University; Center for Occupational Education, 1975); Committee on Vocational Education Research and Development, *Assessing Vocational Education Research and Development* (Washington, D.C.: National Academy of Sciences, National Research Council, 1976).

37. A detailed summary of the Act is found in Appendix B.

38. U.S. General Accounting Office, *op. cit.*

39. U.S. Congress, House, Committee on Education and Labor, *The Vocational Education and National Institute of Education Amendments of 1976: Report to Accompany H.R. 12835*, House Report No. 94-1085, 94th Cong., 2nd sess., 1976, p. 14.

40. *Ibid*., pp. 68-71.

41. Drewes and Katz, *op. cit.*, as quoted in House Report 94-1085, p. 19.

42. U.S. Congress, Senate, Committee on Labor and Public Welfare, Education Amendments of 1976: Report to Accompany S. 2657, Senate Report No. 94-882, 94th Cong., 2nd sess., 1976, p. 66.

43. Report by the Congressional Research Service cited in House Report, op. cit. p. 17.

44. U.S. General Accounting Office, op. cit., pp. 28-29.

45. Drewes and Katz, cited in House Report 94-1085, op. cit., p. 21.

46. Committee on Vocational Education Research and Development, op. cit.

47. House Report, op. cit., p. 12.

48. Senate Report, op. cit., p. 60.

49. House Report, op. cit., pp. 33-34.

50. Sec. 106(a)(5)(B).

51. Senate Report, op. cit., p. 71.

52. U.S. Congress, Committee of Conference, Education Amendments: Report to Accompany S. 2657, House Report No. 94-1701, 94th Cong., 2nd sess., 1976, p. 220.

53. Letter of June 29, 1977, from Senators Pell and Javits and Representatives Perkins and Quie to Commissioner Ernest Boyer.

54. A fourth change allowed maintenance of effort to be computed on a per pupil rather than overall basis, in recognition of declining enrollments.

55. Senate Report, op. cit., p. 56.

56. Public Law 94-482, Sec. 101.

57. Public Law 90-576, Sec. 101.

58 Conference Report, op. cit., p. 214.

59. The 1968 law allowed for a transfer of $5 million to the Department of Labor to develop job demand data, but this was never implemented. See House Report, op. cit., p. 39.

60. See Chapter IV.

61. House Report, op. cit., p. 41.

62. Public Law 94-428, Sections 162(b) and 112(b)(1)(B).

63. Senate Report, op. cit., p. 66.

64. Senate Report, p. 60 and p. 68.

65. Public Law 94-482, Section 107(b)(3)(A).

66. Conference Report, op. cit., p. 108.

67. The old separate programs of residential schools, cooperative education, work-study, research and training, and exemplary and curriculum development programs disappear, with the first three (along with a new one--energy education) becoming uses to which states may choose to put their basic (80 percent) grant, and the last three (along with a new one--to address sex bias) authorized uses for the program improvement (20 percent) set aside.

68. Committee on Vocational Education Research and Development, op. cit.

69. House Report, op. cit., p. 21.

70. House Report, op. cit., p. 12.

71. Section 104(b)(1).

72. And also for single heads of households, homemakers, and men seeking jobs in areas nontraditional for their sex.

73. House Report, op. cit., p. 17.

74. House Report, op. cit., p. 28.

CHAPTER III. THE EFFECTS OF THE 1976 LEGISLATION UPON THE DISTRIBUTION OF FUNDS

The Education Amendments of 1976, described in Chapter II, made few changes in the purposes of Federal legislation but amended significantly the mechanisms used to promote Federal objectives. The most important of these mechanisms are the planning provisions, discussed in Chapter IV, and the funding requirements.

The most important changes in funding requirements are those relating to the approval of applications for Federal funds, and the distribution of Federal money at the within-State level. These have posed problems in interpretation and implementation and have given rise to continuing controversy. The new requirements for how States must match Federal funds also have generated debate and confusion. This chapter describes the basic structure of VEA funds distribution, and analyzes, in detail, the new application approval and funds distribution provisions and their implementation. It then discusses the new matching provisions and, finally, the other VEA funding requirements, most of them continued from pre-1976 legislation.

The Basic Structure of VEA Funds Distribution

The Vocational Education Act provides for grants-in-aid to the States and territories, which they may receive only upon submission to the Federal government of a general application, program plans, and an accountability report. The bulk of Federal funds appropriated under the Act is allotted to the States and other jurisdictions in the form of these grants, which are calculated on the basis of population and income ratios. States must allocate funds among eligible local education agencies and other eligible recipients (predominantly postsecondary institutions) which apply for them in accordance with a number of statutory conditions.

Since 1976, the major part of each State's grant has been divided into a "basic grant" (80% of the total) and a "program improvement and supportive services grant" (20% of the total). Certain proportions of this total grant are "set aside" for the handicapped, the disadvantaged, and postsecondary and adult students. Basic grant funds, and those funds from the program improvement and supportive services grant which are used for guidance and counseling, must be distributed in accordance with new criteria laid down by the 1976 Amendments. However, within these constraints, the range of permitted uses of funds is very wide. Federal law specifies that priority should be given to certain types of programs, but no general provisions are made for the allocation of funds within a particular school district to programs or to schools. Which schools, programs and students benefit directly from Federal funds depends ultimately on State and, even more, local policy.

States also receive separate grants for consumer and homemaking education programs, and special programs for the disadvantaged. In fiscal 1978, when the appropriation for distribution to the States was $495 million, they accounted respectively for 7.5% and 3.4%. Bilingual vocational training projects were funded directly by the Commissioner of Education, at a level of $2.8 million.

The provisions governing the distribution of funds to States remained unchanged in 1976, and apply to the basic and program improvement and supportive services grants, consumer and homemaking education programs, and special programs for the disadvantaged. The first step in calculating State entitlements is to divide half of the appropriation among the States and territories in proportion to their share of the national population between ages 15 and 19, twenty percent in proportion to their shares of the population between ages 20 and 24, fifteen percent in proportion to their shares of the population between ages 25 and 65, and fifteen percent in proportion to their shares of the population between ages 15 and 65. Then each allotment is inversely weighted by the ratio of State to national median per capita income so as to increase allotments to the poorer States and decrease those to the richer. There are three constraints on this second step. No State or territory may be granted less than $200,000, receive less than in the previous year, or have its first step allotment adjusted by more than 20 percent. The separate appropriations for consumer and homemaking education and special programs for the disadvantaged are allocated in the same way. (The formula thus directs funds to States largely on the basis of youth populations: at the first stage of allotments, 70% of funds go out on the basis of population aged 15-24). Alternative formulae using other factors, and the allocation patterns they would produce, currently are being examined for the U.S. Department of Education.[1]

The provisions governing the distributions of funds within States were modified considerably in 1976. The 1976 Education Amendments introduced new requirements affecting the approval of applications for funds and the distribution of funds to approved applicants. The Act and, on Congressional instructions, later regulations, also altered the way funds set aside for programs for the disadvantaged and handicapped are matched. At the same time, a number of existing provisions were retained or modified, including other matching requirements, and provisions dealing with maintenance of fiscal effort, supplanting, and some additional set asides.

Application Approval and Funds Distribution Requirements: The Development of State Funding Formulae

The application approval and funds distribution requirements have, as implemented, required the development by States of formulae for distributing Federal funds. They have also given rise to serious problems in interpretation and enforcement. The statutory provisions involved appear in Section 106(a)(5)(A) and (B) of the 1976 Act. Section 106(a)(5)(A) affects the approval of applications for funds and requires the States to give priority to those applicants which--

> (i) are located in economically depressed areas and areas with high rates of unemployment, and are unable to provide the resources necessary to meet the vocational education needs of those areas without Federal assistance, and
>
> (ii) propose programs which are new to the area to be served and which are designed to meet new and emerging manpower needs and job opportunities in the area and, where relevant, in the State and the Nation. . . .

The second separate provision (Section 106(a)(5)(B)) pertains to funds distribution and requires both that

> the State shall, in determining the amount of funds available under this Act which shall be made available to those applicants approved for funding, base such distribution on economic, social and demographic factors relating to the need for vocational education among the various populations and the various areas of the State. . . .

and that two specified factors must be the "two most important factors in determining this distribution." In the case of LEA's these are:

1. the relative financial ability of such agencies to provide the resources necessary to meet the need for vocational education in the areas they service; and
2. the relative number or concentration of low-income families or individuals within such agencies.

For other eligible recipients, the two most important factors are:

1. the relative financial ability of such recipients to provide the resources necessary to initiate or maintain vocational education programs to meet the needs of their students; and
2. the relative number or concentration of students whom they serve whose education imposes higher than average costs, such as handicapped students, students from low-income families, and students from families in which English is not the dominant language.

In addition, the statute (in Section 106(a)(5)(B)(ii)) prohibits States from using three types of allocation procedures. First, Federal funds may not be allocated solely on the basis of "per capita enrollment." Second, they may not be allocated solely "through matching of local expenditures on a uniform percentage basis." Third, VEA funds may not be denied to an applicant "which is making a reasonable tax effort solely because such recipient is unable to pay the non-Federal share of the cost of new programs." (Sec. 106(a)(5)(B)(ii))

These requirements combine provisions from both House and Senate bills. Both Houses had concluded that existing statutory requirements did not ensure that districts and institutions received Federal funds commensurate with their needs. Both, therefore, introduced requirements designed to correct the situation.

The House did so through the funds distribution requirements. The Senate did so through requirements for application approval which also instructed States to give priority to applicants proposing new programs. The final Act combines requirements from the House and Senate bills, repeated verbatim.

The general intention of Congress with respect to the allocation of vocational education funds among school districts and other eligible recipients appears relatively clear: States were to allocate funds so as to equalize and expand educational opportunities by giving priority to applicants with greater needs for vocational education, to applicants with limited fiscal ability and to applicants proposing new programs in response to new and emerging training needs. However, while the general intention is clear, the statutory language leaves many important operational issues unresolved.

Responsibility for promoting faithful implementation of Congressional intent at the State and local level rested with the Office (now Department) of Education, and the ambiguities and uncertainties inherent in the statute created a need for wide-ranging interpretation and guidance to the States. The following sections describe first, the statutory mechanisms created by Congress to achieve its ends; second, how OE's Bureau (now Office) of Adult and Occupational Education interpreted the statutory provisions and applied them in reviewing State applications and plans; and third, implementation at the State level.

Problems in the Statutory Language

Four major operational issues were left undecided by the statute. The first concerns how to apply and integrate the House and Senate provisions, both of which were incorporated into the final bill virtually unchanged. The second concerns the relative weights to be assigned to particular factors. The third relates to the actual measures to be used to represent the factors. The fourth concerns tensions between funding and planning provisions.

Relationship between the provisions. Although the application approval and funds distribution criteria are enumerated separately, it is nowhere specified that they must be applied through separate procedures. Consequently, there are three major posible interpretations of how a State might use the "priority" and "distribution" factors. It might first decide which applicants to approve on the basis of priority factors and then use separate criteria for funding approved applications. Or it could merge all the statutory factors into one funds distribution process, but establish a cut-off point so that some applicants receive no VEA funds. Finally, it might fund all applicants through a single funds distribution process using all the factors.

Factor weighting. The statute is also extremely unclear concerning the issue of what preference and weight should be given to particular factors. The reference to "two most important factors" seems to imply that States should use clearly specified arithmetic formulae (since otherwise one can hardly determine whether or not a statutory distribution factor is more important than any other individual factor in use). However, beyond this, the statute gives little guidance on weighting.

Thus, it is unclear (1) whether the "two most important" factors for funds distribution should be given greater weight than the priority factors, (2) how distribution criteria and priority factors are to be combined with priority criteria appearing elsewhere in the statute (e.g., those giving priority to areas with high youth unemployment and school dropout rates in the allocation of cooperative vocational education funds),[2] (3) whether there should be any limit set on how many other "economic, social and demographic factors relating to the need for vocational education" a State may use, and (4) exactly how much more important each of the specified criteria is to be than any of the others. These last two points mean that the combined effect on distribution of the statutory factors could in theory be quite limited. Nor is the lack of specific, mandatory factor weights offset by any specification of intended outcomes other than the prohibitions of distribution on the basis of per capita enrollment or uniform percentage. In general, the range of permissible weightings, and distributions, is left unspecified.

Factor definition and measurement. The statute also leaves unspecified a number of important issues relating to the definition and measurement of factors. The first is that certain of the statutory factors appear to overlap. Both the application approval and the funds distribution provisions refer to fiscal inability. In addition, one of the priority provisions refers to "economically depressed" areas and areas with "high rates of unemployment," although one way of measuring economic depression may be high rates of unemployment. It is unclear whether overlapping terms may be merged by States or must each be used separately.

In addition, there is considerable ambiguity in the definitions given the "priority" factors, each of which in fact constitutes an amalgam of factors. One requires, for example, that priority be given to applicants who (1) are in "economically depressed areas" and (2) are in areas with "high rates of unemployment" and (3) cannot provide the necessary resources for vocational programs without Federal help (Sec. 106(a)(5)(A)(i)). The statute does not specify whether States should first choose applicants from economically depressed areas, and then, from among these, those with high rates of unemployment, and so on. Nor does the law indicate whether or not these are additive concepts, to be scored separately and summed. Similarly, it is unclear whether a State may give priority to one of these concepts to the exclusion of others. The same problem applies to the "new programs" criterion.

By contrast, the definitions of the two distribution criteria are reasonably clear. However, both they and the priority criteria leave issues of measurement unresolved. Data on such characteristics as unemployment rates and numbers of low-income families are frequently not available by school district, and prorating data from larger units (such as counties) can result in inaccurate estimates; and, as the following section on Federal interpretation will illustrate, it is extremely difficult to develop a sensible operational definition of "new" programs.

Finally, the statute's lack of specificity in defining factors and stating how they should be measured leaves room for a very wide range of distributional outcomes. For example, different definitions of financial ability can identify very different districts as "needy." Similarly, the way raw data relating to a given factor are used and inserted into a formula can affect enormously the apparent range of need, and relative claim on resources, of an applicant for funds. The effects of the statute's lack of explicitness in these respects are discussed further below in describing States' implementation of the provisions.

Tension between funding and planning provisions. Finally, there is an incipient tension between the approval and distribution requirements and those parts of the Vocational Education Act intended to promote comprehensive planning. As already noted, the statute implies that each State is to use an arithmetic formula, which will then determine completely how funds are distributed. However, this distribution will not necessarily correspond to the priorities and decisions that emerge from the planning process - especially since the latter is likely to involve subjective judgments of program quality and need, whereas the distribution provisions require that only social, economic and demographic factors relating to need be used, presumably factors on which objective data and not simply subjective judgment are available. The statute nowhere addresses this possible tension, discussed further in Chapter IV.

The issues left unresolved by the statute, which ranged from how to measure factors to the relative priority to be given different funding targets, created a need for careful interpretation and wide-ranging clarification by the Bureau of Occupational and Adult Education (BOAE). The extent to which this occurred can be seen from the description of BOAE's interpretation and monitoring that follows.

Interpretation and Implementation of the Statute by Federal Officials

During the last three years (fiscal 1978-80) the Federal government has done little to clarify or interpret the statutory provisions. In part because of political signals (discussed further below), the regulations[3] do little more than repeat the statutory language. However, in response to evident confusion among the States, a discussion document was circulated in the spring of 1979, followed by drafts of a funds distribution policy manual. To date, this has gone through four versions, but has not yet received final approval. Nonetheless, the drafts do convey the procedures that Federal analysts were encouraging States to adopt at the time. Other clarifications involving interpretation were conveyed to individual States during monitoring and, in some cases, drew upon formal opinions requested by BOAE from HEW General Counsel's Office.[4]

Three points emerge clearly from the draft funds distribution manuals, as well as from the correspondence between Federal and State officials. First, BOAE has almost always addressed the meaning of individual statutory terms, rather than working from Congressional intent and what this implies for the outcomes of the application approval and distribution process. Second, interpretations have often been unstable and/or imprecise. For example, if a detailed interpretation in one draft of the policy manual caused controversy, it would generally be withdrawn in the next without clarification of the underlying issue. Third, and as a direct result of the first two points, a number of the issues left unresolved by the statute remain so. The following sections discuss BOAE policy-making, and these general characteristics, in terms of the substantive requirements and issues raised by the statute.

The formula requirement. During the first years after the 1976 Amendments took effect, Federal analysts said little about the general type of funds distribution procedure required. However, the regulations, issued in October 1977, imply that an arithmetic funding formula must be used.5 Moreover, BOAE specified that the formula requirements apply to the basic grant (Sec. 120), to grants for vocational guidance and counseling (Sec. 134), to grants for special programs for the disadvantaged (Sec. 140) and to grants for consumer and homemaking education (Sec. 150)--approximately 90 percent of the $495 million spent in 1977-78.

At the same time, BOAE has permitted States to use different formulae for the different grants (provided each formula is judged legal by BOAE), and also to divide grants up into "pools." Thus, a State might divide (or re-categorize) its basic grant: so much for work-study programs, for example, or so much for area technical schools. Funds within each pool are distributed by formula, but only applicants for funds in the particular pool are considered . This practice makes it easier for States to combine distribution by formula with the implementation of a goal and program-oriented plan.

A major source of controversy related to this provision has been BOAE's insistence during 1979 and 1980 that State-funded community college systems must have funds allocated among their different campuses by formula. A number of States argued that the administrative structure and full State-funding of their community college systems made them classifiable as a single eligible recipient. They argued that their "relative financial ability" was identical, and their recruitment area the same--the State. Therefore, no formula need apply--or was being applied by them.

Faced with this position, BOAE allowed adamant States to fund on this basis in FY 1979 while cautioning them that they would probably have to change once counsel's opinion had been obtained. In September, 1978 (3 months after use of FY 1979 funds was authorized), a policy interpretation went out to the States. It stated that "all postsecondary institutions, with the exception of multicampus institutions under the administration and control of one local administrative body"--as opposed to one administrative body--are separate eligible recipients to be funded accordingly. The interpretation reads the legislative intent as being to provide differing amounts of money to areas and institutions differing in pertinent characteristics. General Counsel held that, in practice, community colleges' recruitment areas differ. Consequently, even when one of the distribution criteria laid down for "other eligible recipients"--that of relative financial ability--cannot be used, funds must be distributed through a formula incorporating the other factor of relative number or concentration of higher-cost students.

Federal policy on formula effects. In examining the State plans, BOAE did not at first ask questions about the effects on the distribution of Federal funds that would be produced by the formulae proposed. Only in 1979-80 (FY 1980) were all States required to provide, in their plans, real examples of the entitlements their formulae would give to districts (such as a "rich" and a "poor" district). Moreover, since the States could choose their examples, the exercise said very little about the operation of a given formula. In that same year, a number of States received mid-year "quality reviews" from BOAE which queried whether the small differences in allocations or reimbursement rates were in keeping with Congressional intent. However, this was a suggestion for improvement, not a warning that changes would be required.

In limiting its examination of effects, BOAE's position was that it should follow existing statutory language with minimal further interpretation. At the same time, not all its analysts have held to this position consistently. Instead, particular States have been persuaded to change their formulae on the basis of arguments about effects.

One issue has been the way in which student counts are incorporated into their funds distribution process. Clearly, student counts must be taken into account in funding, or a small rural district might receive a greater number of dollars than a large city. What most States were doing, therefore, was using their formulae to calculate a district's "score," and then multiplying this by the number of students to get actual entitlements.

However, in one region, States were encouraged to ignore student counts in applying statutory factors' weights and instead to add to these weightings a separate factor for the number of students in the districts. For example, if a district earned 9 points on other factors, it might get 3 more if its pupil count were between 50 and 100 and 4 if its count were 100-200--or 5 or 6 points depending on the scale and level State officials happened to choose. No specific recommendation to ignore student counts in calculating statutory factors was ever formally incorporated into the manual, although the "model formulae" presented in one draft included one using the "additive" approach.[6] However, States which were persuaded to change experienced large-scale shifts in funds as a result.

The reason advanced for the "additive" approach was that an examination of allocations in a number of States showed student counts to be their single most important funding determinant. This was because the way scores were awarded on the component factors left very little difference between districts. However, the response compounded the problem by failing to address directly the relationship between the basic formula factors and outcomes, instead separating formula factors from district size--a critical measure of need.

The decision to demand formulae for all funds distribution while not clearly addressing their effects left the States with a very wide range of permissible behavior. It did not, however, provide for quick or simple monitoring or automatic approval of States' proposed methods. BOAE's determination to enforce all the "technical" requirements of the statute, the statute's lack of clarity, and the absence to date of definitive guidelines have led to continual problems in formula review. The following sections review whether and how Federal officials have interpreted the unresolved issues in the statute.

Relationship between the application approval and funds distribution provisions. On the question of how to combine the application approval requirements and the funds distribution requirements, the position of the latest draft policy manual is that States may choose between a "two-step" process in which applicants are screened and pre-selected using the priority factors, or a "one-step" process whereby all factors are used in one formula. Moreover, in the latter case, no cutoff is required, and all applicants may be funded. There has, however, been considerable delay (with consequent State confusion) in reaching this position; and it has not been made final, in part because of objections from Congress to an endorsement of the "one-step" process. During the period immediately after the passage of the 1976 Amendments, at least one BOAE analyst was requiring a two-step procedure.

Issues of factor weighting. As noted, the statute leaves unclear how the component parts of the priority factors are to be combined or what their overall weight is to be relative to other factors. On the first issue, Federal policy originally was to require that recipients meet each and all the component criteria of a factor. That is, districts should be given priority if they were economically depressed and had high unemployment and had low fiscal ability. New programs should be new to the area to be served and designed to meet new and emerging manpower needs and job opportunities. The basis for this interpretation, which was conveyed through and during the plan review, was direct quotation of the regulations, which in turn echoed the statute.

In many States accurate measures of "economic depression" are not available at the school district level, however, and BOAE gradually came to accept unemployment rates as a proxy for economic depression. As a result, States could merge the first two components of the first priority factor into one. It also, under State pressure, allowed priority to be given, first, to programs similar to others but new to a particular geographic area, and later, to major expansions of existing programs to meet employment needs.

On the second issue, the relative weight of the statutory factors, BOAE has attempted to clarify the situation and, during the course of fiscal 1980, provided an interpretation which is current policy, although contained in the funding manual that remains in draft. It is that, in cases where a one-step process is used, the first and second most important factors are to be the "distribution" factors, and the third and fourth most important, the "priority" factors. No requirements exist, however, regarding the combined weight of the statutory factors relative to others that may be included in a formula, or the number of additional factors that may be included. Here interpretation is strictly "literal" so that States must simply give greatest individual weight to the distributive factors (and next greatest, where applicable, to the priority factors).[7]

Factor definition and measurement. The statute also left unresolved a number of definitional questions related to overlap in the measuring of factors and data availability. BOAE officials have not addressed possible overlap between, for example, the concept of ability to provide resources as it appears in the priority factors, and that of relative financial ability as it appears as a distribution factor. By contrast, they have attempted to provide firm operational definitions of the various statutory factors, although policy on what is acceptable has shifted and changed over time.

In the case of the first priority factor there has been controversy over the way economically depressed areas are to be defined. Many States used the criteria employed for counties under the Public Works and Economic Development Act--criteria so broad that nationally, over 80% of the population live in "depressed" areas. In addition, in many States, counties may contain a number of school districts of varying need. BOAE first accepted use of the criterion, then shifted to active discouragement (and advocacy of proxies--such as the unemployment rate). It then shifted yet again to the current policy of acceptance.

In the case of the new program factor, there has been a shift in policy which greatly increases the permissible range of "new programs." Here, the problem was less data availability than how to provide a sensible definition at a level so far removed from program implementation. The intent of the requirement is to discourage localities from continuing to operate outdated or unnecessary training programs and to anticipate labor market needs that might cause shortages in the absence of trained workers, objectives which are also emphasized by the Act's planning provisions. However, the interpretation of the language is extremely difficult because tight Federal specification of the characteristics of new programs can easily preclude large numbers of sensible proposals from being funded. It was because States convinced BOAE that it was disallowing programs consistent with both sensible planning and Congressional intent that the definition was broadened, leaving the current situation in which applicants can easily manipulate the definition.

There may also be an inherent tension between the two factors just discussed, the economically depressed areas factor and the new programs factor. Districts which propose new programs in response to emerging employment opportunities in their area may often be communities experiencing economic growth and prosperity, and may not be districts with high unemployment rates or limited financial resources. The various "need" indicators are also far from perfectly correlated. Areas of high concentrations of low-income families are by no means the same as areas with low fiscal ability; and using a range of need criteria means that, to a significant extent, they offset each other.

In the case of the *relative financial ability* distribution criterion, BOAE drew on the legislative history to provide specific operational definitions of this term. According to the VEA regulations, this factor may be measured using per capita property wealth, or total local tax effort (local per capita tax revenues divided by local per capita income). However, a number of States have objected to the regulations, because they are without up-to-date school district counts of total population and only a few compute per capita income by school district. Many States have wanted to use, instead of property wealth *per capita*, property wealth *per student*, since they have district-level student counts readily available and this is the measure most commonly used in State school finance equalization programs. BOAE has rejected this on the grounds that it "does not account for adult populations or for wide variations in relative school populations among recipients."[8] However, presumably as a result of continuing State pressure, the draft policy manual is more permissive than the regulations, in that it recognizes the possibility of using alternative measures when required data are unavailable at district level, and demonstrated to be so by the State.[9]

BOAE has also assigned a precise definition to the "*relative number or concentration of low-income families*," the second of the distribution factors to be used for LEA's. It is defined as meaning the number of low-income individuals or families relative to the total population, or number of families in the LEA, and not the number relative to the Statewide total.[10] The argument for adopting this definition is that it recognizes the presumed additional demand on services that may exist in a district with a very high percentage of low-income people.[11]

As the discussion of the financial ability factor suggests, obtaining district-level income data is a considerable problem for many States who must rely on proxies or prorate county totals among districts. Typically, prorating is based on the distribution of the county's total population among LEAs. Thus, to the extent that target populations are not evenly distributed in relation to the total population, some LEAs are penalized while others are favored. Moreover, the county-level data themselves may be as much as 11 years old, for updates between the decennial censuses are available in some States only for areas with populations of 50,000 or more. Since December, 1979, policy has become more permissive regarding the use of proxies for low-income statistics. If a State can demonstrate that the data are not available at the LEA level, it can now use other measures, including, it seems, a number which were previously disallowed by BOAE--Title I counts, AFDC counts, or school lunch eligibility data.

The final distribution criterion expressly specified by the 1976 Amendments is that of above average costs, and is applied to other eligible recipients--mostly postsecondary institutions--instead of the low-income factor. It directs States to consider the "relative number or concentration of students" whose education imposes higher than average costs; and here again, BOAE interpreted "relative" to mean concentration within institutions rather than relative to State totals. Otherwise, no requirements are placed on States to determine whether certain groups impose additional costs, or how far these differ among groups. With no readily available alternative, States generally use institutions' own counts of those students (handicapped, low-income, and with limited English) mentioned in the legislation.[12]

Finally, BOAE has given States no guidance or instructions regarding the way they standardize data and combine measures into a formula. As will be discussed further in describing State practices, the procedures adopted have enormous effects on the ultimate distribution patterns.

In summary, while BOAE personnel generally described themselves as enforcing only the letter of the law, the interpretation process has in fact been inconsistent. At times, a very narrow interpretation will be adopted; while at others, a far more substantive interpretation takes place. There has also been a number of actual policy shifts, such as:

(a) a shift from acceptance to active discouragement of the Department of Commerce definition of depressed areas, and then back to acceptance again;

(b) the gradual expansion of what may acceptably be termed a "new program";

(c) increasing acceptance of proxies for low-income and other statistics and acceptance of proxies (e.g., AFDC counts) expressly disallowed before;

(d) explicit acceptance of a "one-step" funding process, where some earlier plan reviews demanded a two-step.

Application of BOAE policy in plan review. Federal funds reach a State only after review and approval of its annual plan and accountability report. This review covers all Federal requirements--for example, planning provisions, and other funding provisions, including reports of disbursements to all recipients.

The formula-related requirements, however, have been a major reason for both the lengthiness of the process and the number of problems found with State plans in the period since the passage of the 1976 Education Amendments.

If States are to be able to spend funds from the beginning of the fiscal year, they must submit their plans by June 30th. The plans are given a preliminary review for "substantially approvable" status. Only when this approval is obtained may carry-over funds be spent. Once the plan has received full review and final approval and the current year's grant has been made, new funds can be applied to expenses incurred from the date of "substantially approvable" status. Thus, if a plan is not "substantially approvable" at first reading, no Federal funds can be spent between June 30th (the end of the previous VEA funding period) and the date when sufficient revisions and changes are made for "substantially approvable" status to be determined. After this preliminary review, the full "compliance review" takes place. Only after compliance has been determined--and any required changes made--is the grant actually transmitted to the State. These arrangements create considerable pressure for both State and Federal officials, even if requirements and regulations are clearly understood. States are rarely able to submit plans much before the due date of June 30th, in part because of uncertainty about their entitlements. While they are informed of the rough figure in late spring, in 1979 they received final dollar figures in August, and in 1980 in May. Then, the preliminary review process takes time so that even if a plan is judged "substantially approvable" right away and a June 30th date established for disbursement, a State will rarely be informed of this for several weeks. The full review process is inevitably prolonged because of the detailed checking of the many fiscal and non-fiscal requirements, so that

States can always expect to receive grants when already well into the school year and the July-to-June funding period.

The lack of clear and consistent interpretation of the formula requirements has greatly worsened the situation. Substantive issues emerged piecemeal, with a funding workshop to train new analysts (winter, 1978-9) producing some of the first detailed analyses of formulae and discussion of interpretive issues. Often, questions have been answered well into the year, when BOAE staff were preparing the advisory analyses or "quality reviews" which the Commissioner of Education must transmit to each State within four months of receiving its plan. In consequence, many States, having received approval of their plans in the fall, then received "compliance" or "deficiency letters" disapproving various of their activities along with the quality reviews.

At the same time, BOAE officials have encouraged strict enforcement of technical aspects of compliance, such as whether fiscal ability is measured per student or per capita. This has been in response to Congress' strictures in 1976, when both the House and the Senate were harshly critical of BOAE's monitoring of State activities. For example, the House Report complained that:

> As a result of this lack of effective monitoring of the expenditure of Federal funds, some states have disregarded requirements of Federal law concerning the methods which must be used for distributing Federal funds within the state and some states have failed to follow the requirements that certain minimum amounts of Federal funds must be used every year on programs for the handicapped and disadvantaged.[13]

BOAE staff have, therefore, over the period 1978-80, paid close attention both to plans and to the new, more detailed accountability reports required by the 1976 Act. However, procedures may be described as mechanical. In reviewing State plans, staff use a detailed, standard checklist, which essentially repeats the requirements of the regulations. States have complained about policy reversals and repeated "non-compliance" findings on the basis of what they see as technicalities. Yet, it is also true that many States had not had their formulae analyzed in detail until they were subjected to review in the fall of 1979.

When the Education Amendments of 1976 were adopted, it was administration policy to minimize Federal control of State decision-making. Partly as a result, the regulations--which did not go far in clarifying the statute--were drawn up by a task force in which a high proportion of members came from the vocational education community. The Bureau also received little encouragement from Congress to issue guidelines. The additional monitoring personnel provided for in the legislation were also never engaged.

Confusion over policy and delays in its clarification might have been reduced had BOAE sought advice early from school finance experts and solicited information from the States on the measures and approaches available to and used by them. BOAE could also have sought to deal with some problems through technical amendments to the legislation, but it appears to have been reluctant to consider this course of action. In general, its activities have done little to resolve the issues raised by the statute.

Effect on plan approval. The net result of BOAE procedures in reviewing the plans for fiscal years 1979 and 1980 was that every single State was judged out-of- compliance on one or other aspect of the formula. In one or both years, over half had their formula approved when first submitted, only to be informed of newly identified out-of-compliance items later in the year. Sixteen States had their plans disapproved because of inappropriate measures of the "priority" factors, and twenty-eight States for the way they measured distribution factors. BOAE found problems in the procedures proposed by most States--with five over the one-step/two-step question, and with twenty-six because of inappropriate weightings. Nine States took issue with BOAE over the procedures for funding community colleges, of which at least three were still not using a formula for them in 1980.

While many problems might have been expected early on, the continuation of seemingly endless lists of out-of-compliance findings makes it clear that the problems were not resolved and persisted. As late as January 1980, a major State with a not unusual "compliance" history submitted its proposed 1981 formula for comment. Among the factors on which BOAE found it out-of-compliance were:

(1) allocation to regions impermissible: must rank all eligible recipients individually;

(2) relative ability to pay factor must be per capita, not by age 15-64;

(3) proxy proposed for concentration of low-income factor is unacceptable. Also, must use figures for each individual agency, not a wider (regional) area;

(4) no factor for economically depressed areas evident;

(5) minimum foundation aid not a permissible factor; and

(6) weighting for new programs not apparent (proxy unacceptable).

This was only one of a number of States for which BOAE has raised basic questions about the formula three years after the 1976 Act took effect. The persistence of formula problems suggests a genuine confusion on the States' part over the nature of the funding requirement, or a real inability to secure appropriate data. However, it may also be viewed as a product of what is reported to be the desire of States to continue to fund localities already receiving funds and to construct formulae which do this.

Distribution of Funds by the States

In implementing the application approval and funds distribution requirements, States were faced with a statute in which many issues were unresolved and regulations which for the most part merely echoed the legislation. Further, guidance from BOAE was slow in coming and frequently inconsistent. Moreover, the language of the statute and its interpretation by BOAE left States entirely unconstrained in some of their most important decisions.

In their distribution procedures, States must use the statutory factors, accord them the greatest weight, and use measures designated as acceptable by BOAE. However, they are free to use a one-step or a two-step distribution process, to fund some or all applicants and can divide funds into pools and/or use different formulae for different subparts of their grant. Equally important, the law and regulations are silent concerning aspects of the formulae and distribution process themselves. They are the way raw data are scaled for use in the formula (and the resulting range of scores); the precise weights attached to different factors; and the way they are actually combined mathematically. The result is that an extremely wide range of distribution patterns is possible within the requirements of the law. Some States, in fact, claim that it is desired outcomes that determine the nature of their formulae, not some theoretically derived algorithm.

The application process. Prior to 1976, States did not have to describe their distribution procedures precisely in their plans, and it is practically impossible to reconstruct them. However, most States funded all applicants. This continues to be true. Nearly all use a one-step process and fund all applicants; and only a few use a two-step process in which not all are selected to receive funds. In many States, the formula is used to calculate entitlements and eligible recipients are informed of those before they submit applications specifying their proposed use.

Use of multiple formulae and funding pools. A number of States do use different formulae for different parts of the grant; for example, one formula for the handicapped set aside, another for the disadvantaged set aside, a third for the postsecondary set aside, and yet a fourth for the remainder. This enables them to assign different weights to different factors (and obtain different distribution patterns) according to purpose.

Case studies of 15 States also suggests that further use of funding pools is fairly widespread. Of the sample States, six used this mechanism. Three used it to divide funds among specific types of institutions, such as area vocational centers. Five used it to target funds to new equipment purchases and two set up pools for educational and staff travel. Three used pools for more than one purpose. One set aside 25% of each of its grants (basic, consumer and homemaking education, etc.) for innovative programs, and required LEAs to submit competitive applications for these rather than informing them of their entitlements in advance.

In addition, there are a number of cases where funds are "committed" to particular programs before formula allocation begins. In three States, the State Board makes long-term funding commitments involving, typically, guaranteed funding for new programs for the first two or three years of operation. Another automatically funds special programs in institutions for the retarded, hearing impaired, and blind before allocating the rest of its grant.

Scaling of data. In scaling raw data for inclusion in their formulae, States use a variety of methods. Some scaling or conversion of data is necessary because, for example, dollars that measure property wealth cannot be added to numbers of low-income individuals or to unemployment rates because the range and scale of the numbers involved varies so dramatically. For example, in one district, the low-income population may be 40,000 and the unemployment rate 10%. Obviously, it does not follow that property wealth should be 4,000 times as important as unemployment. Even relative values--ratios of property wealth to the State average, or ratios of unemployment rates to the State average, for example--would be inadequate because the ranges vary. If property values per capita varied by 10 to 1 and unemployment rates varied by only 3 to 1, property value per capita would carry more weight simply by virtue of that arithmetic property. Thus, each must be converted to a mathematically consistent value so that they can be combined without distorting the result.

In the absence of Federal requirements or guidance, States use methods most of which can be categorized as either discontinuous or continuous. The discontinuous methods assign scores to specific ranges of values, similar to displaying data in a histogram with a small number of cells. A typical conversion would be to assign "0" to all unemployment rates below 3%, "1" to all rates of at least 3% but less than 6%, "2" to all rates of at least 6% but less than 9%, etc. The term discontinuous means that there are discrete ranges corresponding to each point. In fiscal 1979, 29 States used discontinuous methods. Continuous methods assign points based on the relative position of a value along a range of values. In other words, the difference between any pair of scores will, under these methods, be proportional to the difference between their raw values. In fiscal 1979, 21 States used continuous methods to convert data to scores.

With either method, States can decide for each measure separately whether they want a wide range of scores, in which some districts receive much higher scores than others, or a narrow range in which districts receive very similar scores. Which they choose will affect the ultimate distribution of scores and, consequently, the "flatness" of the resulting funds distribution.

The discontinuous method can also misrepresent relative differences in measures. Recipients with differences in their original values can have very different scores while recipients with relatively large differences can have similar scores. This is best illustrated by an example. Suppose that districts with between 2 percent and 5.9 percent of families below poverty level are given 4 points, and those with 6 to 9.9 percent are given 5 points. Then, if 5.9% of families in eligible recipient A and 6.0% of families in eligible recipient B, and 6.1% of eligible recipient C's families are below poverty level, then A will receive only 4 points and B and C will both receive 5, even though B and C also have different values.

Factor weights. Since almost all States use a one-step process, they would almost all be expected to have at least the four required criteria in their formulas. Some States use more than the four, but most added factors appear to be other proxies for one of the four criteria in the law. The two other factors which are commonly added in formulas are student dropout rates and measures of sex equity.

Factor measurement. To determine how the laws were being implemented, the 1979 State Plans were examined. They revealed that in their first submissions, States were not using measures specified in the regulations in 1979, although most were using some substitute measure for each of the specified criteria. For example, 34 States were using property value per pupil while only eight were using property value per capita for relative wealth. This is not surprising since population is not disaggregrated by school district each year in every State, while student enrollment is readily available. Eight other States used some measure of tax effort, though not exactly in the form specified. Income or concentration of poverty factors were used in 47 States; a new programs factor was described in only 7 States; and unemployment and/or depressed area factors were used in 29 States. As discussed in the context of Federal plan review, failure to use specified measures led to many States' plans being disallowed during review, and to delays in their receipt of funds.

Exactly what measure were used in 1979 influenced the distribution of funds to recipients. For instance, if property wealth per capita was used to represent relative wealth, districts with relatively few school-age children (e.g., some large cities and retirement communities) generally appeared needier than they would on a per pupil measure. Despite the potential for distortion by the careful selection of measures, it appears that in 1979 States were more strongly influenced in their selection by what current and reliable data were readily available than any desire to subvert the intent of the law. However, the conflicting targeting patterns created by the different statutory factors may result in contradictory effects. For example, property wealth could be inversely correlated with either per capita income or unemployment rates, and poor districts are obviously less able to initiate new programs than are wealthy districts. Therefore, making the hard choices that Congress intended is difficult and resulting distributions may meet all of the legal requirements yet appear more random than targeted.

Formula structure. How recipients' weights and scores are combined mathematically is also the States' responsibility. In their final submissions of the 1979 State Plans, eleven States provided a table of allocations without showing how it was created and six did not describe any mathematical process of funds allocation. Among the remaining 36, there were two types of formulas used: a reimbursement rate method and a weighted points method.

The reimbursement rate equation calculates the percentage of the recipient's current expenditures that will be reimbursed by the State. The weighted points method calculates the percentage of the total available funds that are to be allocated to a recipient. For example, with a reimbursement rate equation, one district might receive points which entitle it to receive 30 percent of its expenditures back from the State while another is entitled to 20 percent. The problem with this method is that how much a recipient receives depends on how much it is able to raise from non-Federal sources. Thus, a wealthy district with a low matching ratio may still receive more funds in total than a poorer district just by virtue of being able and willing to spend more. Twenty percent of $2,000 per pupil will yield more than 30 percent of $1,200 per pupil.

Under the weighted points method, allocations are a function of how many points a recipient receives relative to the total for the State. For example, if all recipients' total points add up, after weighting, to 1,000, and a particular district has 30 points (after adjusting for student counts), its "weighted points" score is 3 out of a possible 100. This would mean that it actually received 3% of whatever funds were being distributed.

In either case, however, the range of allocations can and does vary considerably. For example, in one State, reimbursement rates were generally between 48% and 52%; in others, they covered a considerably wider range. The flatness of the distribution and the degree to which it changes from year to year, also vary among States. As discussed above, the range of scores on the various individual measures, as well as whether greatest weight is attached to measures with large or small range of scores, has enormous implications for resulting distributions.

In general, therefore, States retain wide discretion in their distribution policies. However, in some cases, formulae have resulted in significant changes in allocation paterns, either independently of or as a result of changes demanded by BOAE. The Final Report will analyze and discuss the changes in terms of the intent of Congress.

Matching Requirements and the Excess Cost Provisions

The matching provisions of the VEA directly affect States' own expenditures by requiring them to devote resources of their own to Federally assisted programs as a condition of receiving Federal aid. However, overall, States and localities have always spent more on vocational education than the Federal government requires, with Federal funds currently providing only about 9% of expenditures. Matching requirements have therefore only affected behavior when matching was required for a particular program or purpose within vocational education which recipients would, on their own, have funded at a lower level.

VEA matching provisions have traditionally required that, for the State as a whole, State plus local expenditures should match each of the separate Federal allocations on a one-to-one basis; that is, should total an amount equal to the Federal contribution. The consumer and homemaking education program is the sole exception, requiring only a 1-to-9 match for those funds set-aside for depressed areas (but 1-to-1 for the rest). The 1976 Amendments, by consolidating most of the separate Federal programs and allocations, also reduced the number of separate matching requirements imposed on States.

At the same time, however, the Amendments introduced important new provisions requiring not only the usual overall match for the basic and program improvement grants, but also new and separate matching of the handicapped and disadvantaged set asides. Moreover, following a letter from the Chairmen and ranking members of the committees concerned, regulations now require that the match be against excess costs only. In other words, Federal funds must be used to pay only for half those costs which programs for the handicapped and disadvantaged incur over and above those incurred when regular students are enrolled. States and localities must contribute the baseline costs plus half the excess costs. Under previous legislation, Federal money could be used to pay all the costs of programs in which handicapped or disadvantaged students were enrolled, since they were part of the basic grant for which only an overall Statewide match was required. If the matching funds were being provided by the district, Federal funds could be used for half of total costs.

The new requirements imply considerably greater expenditures by States and localities. However, when the nature of students' handicaps or disadvantage requires separate, specialized programs, the entire cost of these may be counted as "excess," provided that the average Statewide (State and local) expenditure per handicapped or disadvantaged student equals or exceeds the average for other students. Since Federal funds may then be used for half the total costs of the program, reducing the local or State contribution, this creates a possible incentive against the mainstreaming approach emphasized in the language of the Act and regulations.[14]

During fiscal 1978, separate matching of disadvantaged and handicapped funds was required, but only against total costs. States appear generally to have met the requirements and spent the funds. When the excess cost provisions were then promulgated, many States protested that they and their districts would be unable to meet the matching requirements. A few have threatened to return funds, but it is not yet clear whether this will occur.

In addition to difficulties caused by the general funding increase which States must provide, there is a problem associated with requiring the greatest financial contributions in connection with programs serving high-need students. In principle, the match need only be Statewide; and Federal interpretation emphasizes that States may allow less than a 50% match for an individual needy district, and offset this ratio elsewhere. However, in practice, many States require local matches by recipients.

The provisions themselves tend to encourage local matching. They mean, for the first time under the Vocational Education Act, that administrators must monitor districts' programs individually, since only by knowing what excess costs amount to can they know if they are being matched. The simplest way to monitor is for States to demand that recipients each match their own grants. However, this, in turn, could mean that most matching is required of districts with large disadvantaged and handicapped enrollments and many programs to serve them. In some of the fifteen case-study States studied for NIE, State administrators stated that what had happened instead was that set aside funds were not necessarily targeted to districts on the basis of their need for such programs, but instead sent to any districts prepared to comply with the matching requirements.

With respect to other general matching requirements, research in the fifteen States studied for NIE indicates that States do generally require matching of all Federal funds by the recipient. The major exception is new programs, where some States provide 100% funding the first year. However, financial pressures are making eligible recipients less inclined to become involved in completely new programs for which they will eventually have to provide funding. Ongoing research on services to special needs populations at the community level will provide additional information on how the provisions affecting the disadvantaged and handicapped students are working, and will be described in the Final Report.

Other Fiscal Requirements

In addition to the new provisions affecting application approval and funds distribution procedures, and the matching of excess costs of programs for the handicapped and disadvantaged, the Vocational Education Act contains:

i. further requirements that money be set aside for specific recipients or programs;
ii. additional funding priority requirements;
iii. maintenance-of-effort requirements; and
iv. a supplanting requirement.

Set Asides and Program Requirements

Table III-1 summarizes the requirements for set asides and specific programs. In addition to introducing the new requirements for matching excess costs which were discussed in the previous section, the 1976 Education Amendments introduced new set asides for guidance and for programs for those of limited

TABLE III-1

SET ASIDES AND PROGRAMS REQUIRED UNDER THE VOCATIONAL EDUCATION ACT

I. Set asides from each State's allotment under Section 103 (basic grant plus program improvement and supportive services grant).

- a) 10% to pay 50% of costs (later specified as excess costs) of programs for the handicapped
- b) 20% to pay 50% of costs (later specified as excess costs) of programs for the disadvantaged of which
  - i. the same percentage must be set aside for programs for those of limited English speaking ability as the percentage of the State's population aged between fifteen and twenty-four which is of limited English-speaking ability.
- c) 15% for postsecondary and adult programs.

II. Set asides from each State's program improvement and supportive services grant.

- a) 20% for guidance and counseling

III. Set asides from each State's grant for Consumer and Homemaking Education programs.

- a) One third for economically depressed areas or areas with high rates of unemployment.

IV. Mandatory programs.

- a) States must fund programs for
  - i. persons who had solely been homemakers but who now, because of dissolution of marriage, must seek employment;
  - ii. persons who are single heads of households and who lack adequate job skills;
  - iii. persons who are currently homemakers and part-time workers but who wish to secure a full-time job; and
  - iv. women who are now in jobs which have been traditionally considered jobs for females and who wish to seek employment in job areas which have not been traditionally considered areas for females and men in corresponding positions.

English-speaking ability and required a unspecified expenditure on programs for "displaced homemakers" and related groups. At present, 49% of Section 103 funds (the basic and program improvement and supportive services grants) and 33% of consumer and homemaking education funds must be set aside.

There have been considerable delays in implementing the new requirements for "displaced homemakers' programs" and programs for those of limited English-speaking ability. In the case of programs for displaced homemakers, at least 10 States reported no expenditures on such programs in 1979; and in 1980, there were still six States from whom BOAE was requesting assurances that they would be established.

In the case of the set aside for the limited English-speaking, many States have objected to the universal application of the provision and/or complained of problems in obtaining data. States with very small numbers of limited English-speaking students complained to BOAE that they have no real demand or use for the small amount of funds involved. However, BOAE has interpreted this requirement strictly and told States they must make efforts to identify such students and direct money to serve them. For example, one State which argued that it was receiving no applications for these funds was told to "continue extensive recruitment efforts.... specific efforts may need to be directed toward each minority group." If States can document such efforts and show that funds were unusable, States may return money to the general "disadvantaged" pool. For FY 1979, 10 States and territories reported no Federal expenditures on limited-English proficiency students, and 22 reported no State and local expenditures.

States also complain about the data requirements, since many have to use proxies to obtain estimates of the limited English speaking population aged 15-24. Which proxy is used has enormous effects on results. One State changed measures and went from a figure of 27% limited English-speaking to a figure of 2.5%. In general, this provision has been a consistent source of "non-compliance" findings involving no fewer than twenty-three States and territories.

Additional Priority Requirements

The 1976 Amendments, while introducing new formula requirements, retained requirements that priority in work-study and cooperative programs be given to areas with high rates of school dropouts or youth unemployment (in the case of work-study programs) and areas with high dropout and youth unemployment rates (in the case of cooperative programs.) These are holdovers from when work-study and cooperative programs were separate categorical programs rather than optional uses for funds.

The statute nowhere addresses how these requirements are to be combined with the general formula provisions; and Federal policy guidance has simply echoed the statute and required States to demonstrate that they are using the statutory measures in giving priority to eligible recipients' applications. During 1979 and 1980, at least 13 States had "non-compliance" findings for not demonstrating in their plans that this occurs.[15]

Maintenance of Effort

The maintenance of effort clause requires that, as a condition of receiving funds, each recipient district or institution, as well as each State, shall maintain its level of expenditure on vocational education either overall or (since 1976) on a per student basis. The statute simply calls for maintenance of effort (Sec. 111(b)). The regulations of October 3, 1977, allowed a 5% automatic reduction, but a HEW proposed rule of April 28, 1980, (45 FR 288) would eliminate this automatic reduction. This provision might seem to lock States and eligible recipients into whatever expansions they had undertaken.

Recent high inflation rates, which increase the costs of services, also mean that States, and larger districts and institutions, in fact have considerable freedom to adjust their real levels of expenditure. However, for many smaller districts, the requirement poses serious problems. For example, a large proportion of vocational agriculture courses are in districts with only one vocational education teacher. If an experienced teacher leaves and is replaced by a younger one with a low salary, such districts can often find themselves in violation of the maintenance of effort requirement. At the larger district and State level, too, the requirement is perceived as preventing large-scale reallocation of funds among different types of education program.

Supplanting

The supplanting provision in the Vocational Education Act requires

> that Federal funds made available under this Act will be so used as to supplement, and to the extent practicable, increase the amount of state and local funds that would in the absence of such Federal funds be made available for the uses specified in the Act, and in no case supplant such state or local funds. (Sec. 106(a)(7))

Supplanting provisions are also found in, for example, Title I of the Elementary and Secondary Education Act, which funds compensatory education programs. It is intended to prevent the purposes of Federal funds from being undermined by simply paying for activities that States and their localities would otherwise have funded themselves.

Although the amount of supplanting which takes place is of crucial importance in deciding the ultimate effect of Federal involvement, in the case of vocational education it is virtually impossible to monitor. The major operational constraint is simply that States may not allocate State funds in direct inverse proportion to Federal funds, and some States have been informed of this directly in the context of proposed allocations to community colleges.[16]

Beyond such simple cases, however, the provision is difficult to monitor. The reason is that it is extremely difficult to know what would be happening in the absence of Federal funds in a situation where programs are continuously being changed and reorganized, where non-Federal sources provide the major share of funds, and where the uses to which Federal funds may be put overlap with State and local concerns.[17] It is doubly impossible when local and State contributions rise over time. How can one know what mix of programs would have been provided in a given year without Federal aid; or whether, and by how much, local contributions would have increased? With large quantities of district data (such as do not exist) econometric analysis might approximate an answer to the second question. To the first, which is where Federal regulators' attention is turned, there can in most cases be no answer. Moreover, the emphasis on using Federal funds for new programs increases the problem, since one can hardly determine whether a previously non-existent program would certainly have been funded without Federal aid. The small role played by Federal funds, and the wide range of uses to which they may be put, also reduces the effects of the planning provisions.

Summary

Probably no aspect of the 1976 Amendments has generated more controversy, confusion, and frustration than the issue of how States are to distribute funds to eligible recipients. More than three years after the passage of the 1976 Amendments, clear Federal guidelines have not yet been established, and every State operates under conditions of uncertainty about the Federal requirements.

The problems begin with the statute. The 1976 legislation combined, without reconciling, separate provisions from the House and Senate bills. The intent behind both sets of provisions is clear, namely to allocate vocational education funds so as to equalize and expand educational opportunities by giving priority to applicants with greater needs. However the final statute does not specify exactly what measures States are to use to allocate funds, what relative weights are to be assigned to the measures, how they are to be mathematically combined, and how intensely funds are to be concentrated in the most needy districts. It also leaves unresolved tensions between the different funding objetives identified, and between the new provisions and those dealing with planning. The ambiguity in the statute means that it requires a substantial amount of interpretation to ensure that the process States use to give priority to applications and to allocate funds among recipients is congruent with intent. Lack of specificity in the statute puts a considerable amount of substantive policy making into the hands of the Federal program administrators. In this case, the intrepretation must be based on a substantial knowledge of school finance issues, putting a heavy burden on the administrators and particularly on BOAE.

The regulations issued in October of 1977 by BOAE fail to provide adequate interpretation of the funding provisions. The need was so great that BOAE drafted a Policy Manual, which has, as of September 1980, gone through four drafts and still is not in final form. In general, BOAE guidance has been ambiguous and confusing and perpetuates rather than resolves many of the problems in the statute. Furthermore, there have been a number of actual shifts in rulings. These problems have been reflected in BOAE's review of State plans; every single State has had a formula disapproved for one reason or another. Beyond the question of whether the formulae meet the strict legal requirements is the question of their technical adequacy. In point of fact, no State has designed procedures free of defective mathematical logic, arbitrary judgments, questionable interpretations of Federal law and regulations, and inaccurate or inappropriate data. Until problems are resolved at the Federal level, the States are likely to produce procedures that reflect the current state of disarray.

Federal VEA dollars account for approximately one dollar in eleven reportedly spent on the vocational education enterprise. To have the effect intended, it is crucial that Federal dollars overlay a steady level of State and local dollars. The maintenance of effort and the supplanting requirements place constraints on State and local dollars to ensure this. Supplanting is particularly difficult to define and enforce since it is nearly impossible to know what activities State and local funds would pay for in the absence of Federal funds. With Federal dollars being such a small part of the enterprise, it is essential that they be viewed in concert with State and local dollars to have the intended effect on local practices.

FOOTNOTES

1. See Friedrich J. Grasberger and Jeffrey O. Smith, The Vocational Education Basic Grants Formula, Working Paper #4, (Rochester, New York: Center for Governmental Research, Inc., December 1979). A study simulating different formulae currently is being conducted for the Office of Vocational and Adult Education, U.S. Department of of Education, and will be discussed in the Final Report.

2. Priority must be given to areas with high youth unemployment and dropout rates in allocating cooperative education funds (Sec. 122) and to those with high youth unemployment or high dropout rates in allocating work-study funds (Sec. 121).

3. 45 C.F.R. 104.141(f). The regulations were issued in final form in October 1977. Plans for the first fiscal year after passage of the 1976 Amendments were written using draft regulations.

4. One example is the case of the use of formulae to distribute funds to State-funded community colleges.

5. Federal Register, vol. 42, no. 191, October 3, 1977, p. 53865.

6. "Policy Manual for Federal Vocational Funds Distribution," BOAE/DSVPO-FY 80, draft distributed for review October 5, 1979, pp. 19-21.

7. Draft Policy Manual, 4th version, p. 2.

8. Draft Policy Manual, March.

9. Draft Policy Manual, May, p.5.

10. States may include either low-income families or low-income individuals, but in either case the definition of low-income is to be that used by the U.S. Department of Commerce. The regulations also specify the use of the latest available U. S. Department of Commerce data.

11. Moreover, since States will take express account of enrollment in allocations, larger districts with more low-income individuals are unlikely to receive fewer total dollars.

12. At least one State was encouraged by BOAE to adopt a particular definition of student enrollment. The question of what type of student count to use is not addressed by the statute. However, at one point some BOAE analysts were arguing for the use of vocational enrollment in their formulae instead of overall enrollments. However, this did not become formal policy.

13. House Report, op cit, p. 18.

14. Federal Register, vol. 43, no. 59, March 22, 1978, p. 12357.

15. Reported expenditures on work-study and cooperative programs have fallen. Some Federal analysts believe States are simply not identifying them, but funding them through the regular formula in order to avoid having to integrate the additional factors into their funding procedures.

16. Similarly, BOAE objected to one State's proposed large-scale transfer of Federal money from secondary programs to support of the previously State-supported postsecondary network.

17. By contrast, a program such as Title I (ESEA) provides the major funding for separate compensatory programs, and monitoring is therefore easier, though largely on the basis of the more specific and stronger "comparability" requirements, not the original supplanting clause. For a fuller discussion see Chapters 6 and 8 in Michael Timpane, The Federal Interest in Financing Schooling (Cambridge, Mass: Ballinger, 1978), and the reports of the NIE Compensatory Education Study, 1977 and 1978, available from the U.S. Government Printing Office.

CHAPTER IV. THE EFFECTS OF THE 1976 LEGISLATION UPON PLANNING

Introduction

The Vocational Education Act appropriates Federal funds to be allocated to the States, which in turn distribute them to the LEAs and other eligible recipients. It is the States that decide, within general bounds set by provisions such as funds distribution requirements, on the uses to which Federal VEA funds should be put; and it is through the planning process that these decisions are made. Vocational education is thus very different from Federal programs like Title I of the Elementary and Secondary Education Act, which allocate money directly to counties and define the institutions and pupils to be served, thereby taking funding decisions largely out of State hands. Instead, for vocational education, Congress has looked to planning as a way of bringing about general redirection and reform of the whole vocational education enterprise--for example, to make it more responsive to changes in the structure of the labor market.

Planning requirements have been present since the first piece of Federal vocational education legislation--the Smith-Hughes Act. As described in Chapter III, they have been strengthened progressively when, as in 1968 and 1976, Congress found that desired reforms had not occurred. The submission of plans describing how not only Federal, but also State and local, funds are to be used is a central requirement for the receipt of Federal VEA funds. Both periodic long range plans and annual updates must describe the outcomes of and rationale for State funding decisions.

Under current requirements, which are set out in Section 107(b) of the Vocational Education Act, the plans must: (1) assess current and future needs for job skills; (2) set out the goals which the State will seek to achieve in meeting these needs with respect to programs to be offered, projected enrollments, and levels at which the programs are offered; and (3) set out the planned use of Federal, State, and local vocational education funds and show how these uses will enable the State to achieve its goals. The exact uses to which funds were put and the goals achieved must then be described in the annual accountability reports submitted to Federal monitors.

The problems Congress saw with the planning process, as it was operating before the 1976 legislation, and with the changes introduced in that legislation to correct the problems are treated in Chapter III. Basically, Congress saw a planning process that often did not adequately involve all the potential recipients (e.g., secondary, postsecondary)--a process which did not use labor market or evaluative data to arrive at funding decisions, and a process in which State planning documents were produced merely to comply with Federal requirements rather than to define State goals and steps needed to attain them. The end result was overlapping programs that often did not correspond to available jobs. Plans were compliance documents, "useful to no one, in most cases."[1] The frustrations felt by Congress in 1976 were expressed by one member, who said: "(This) indicates to me that we are back in 1968....that many of the ills we sought to cure by the 1968 Act have not been cured."

In 1976 Congress again sought to bring about a cure by requiring:

- more comprehensive and coordinated planning, both among levels of government through the planning committees and from citizens through the public hearings;

- planning more related to the labor market through use of supply and demand data as well as student placement data;

- more substantive planning and streamlined planning documents; routine "housekeeping" assurances are to be removed from the plan, made once, and kept on file with the Commissioner; there is to be a long-range five-year plan with streamlined annual updates and accountability reports.

At the same time that requirements defining the planning process (e.g., what date to use, whom to involve) were made more prescriptive, consolidation of separate program categories into a block grant provided more flexibility in the planning decisions (e.g., which programs or purposes are to be funded) made during the course of the process. Both the House and Senate believed that changes in the planning process were among the most important made in 1976. In fact, in identifying three major improvements required by the vocational education program, the House Report gives as one, the need for "better State planning for use of funds, more extensive evaluation of local programs, and greater accountability for expenditure of funds must be required at the same time that the present rigid categories of funding in the Federal law are simplified to permit more flexibility in funding particular types of programs."[2]

The following sections discuss the effect of the planning and related accountablity measures on State planning activities[3] and on the resulting decisions. The section begins with a description of the planning process at the State and local levels, distinguishing local decisions and responsibilities from those of the State. The next sections describe the planning requirements in detail and discuss their effects (a) as shown by State-level planning and (b) as evidenced by the planning documents. The effect of the Federal review process is discussed next, followed by a discussion of the capabilities and limitations of the whole planning and review process.

State Planning and Local Decision Making

The majority of programmatic decisions--what programs to offer, which to extend, which to discontinue--are made at the local level. States decide how much Federal money to reserve for particular purposes (new programs, equipment, etc.), set criteria for application approval, and, within legislatively established boundaries, devise the process by which Federal funds are disbursed. States vary greatly in the leverage they can or do exert over locals and, therefore, in the degree to which they influence local decisions. In most States, however, the programmatic decisions are made locally, and State funds are distributed by formula among eligible applicants.

Having made programmatic decisions, LEAs may carry them out entirely with local or State entitlement funds, or, as is most often done, apply to the State for Federal funds for particular purposes. The planning unit, which may be an LEA, a county, or a region,[4] usually has a rough idea of how much money it will receive under the formula because the State has calculated the approximate allotment on the basis of the previous year's Federal appropriation. This is called a "planning entitlement." The planning unit then submits an application for the Federal funds to the State.

The local application, then, is a crucial link between the State and local levels. The information it provides forms the basis for making concrete decisions and, in the Senate's words, "hard choices" on how limited Federal funds are to be spent. The 1976 legislation says that funds will be distributed on the basis of local applications which:

> (A) have been developed in consultation (i) with representatives of the education and training resources available in the area to be served by the applicant and (ii) with the local advisory council...,
>
> (B) (i) describe the vocational needs of potential students in the area or community served by the applicant and indicate how, and to what extent, the program proposed in the application will meet such needs, and (ii) describe how the findings of any evaluations of programs operated by such applicant during previous years, including those required by this Act, have been used to develop the program proposed in the application,
>
> (C) describe how the activities proposed in the application relate to manpower programs conducted in the area by a prime sponsor established under the Comprehensive Employment and Training Act of 1973, if any, to assure a coordinated approach to meeting the vocational education and training needs of the area or community, and
>
> (D) describe the relationship between vocational education programs proposed to be conducted with funds under this Act and other programs in the area or community which are supported by State and local funds; . . ." (Sec. 106(a)(4))

After the application is submitted, the State reviews it, often against such criteria as whether the program seems justified in light of employment demand and the placement rate of previous graduates, and approves or disapproves it. Generally, a State will offer technical assistance to an LEA whose application is disapproved and will work with that LEA until the application is in approvable form. Sometimes the State (or regional planning unit, if there is one) has already assisted in the preparation of the application.

The technical assistance offered at this juncture is an important vehicle through which the State can communicate Federal and State priorities to the locals and can encourage their adoption. However, States claim that their actual leverage is very limited. They feel constrained on the one hand by the requirement that Federal funds go out by formula, rather than on the basis of planning decisions and judgments, and on the other by the tradition of local autonomy. Equally important, the nature of the Federal program leaves local recipients considerable latitude. The Vocational Education Act provides a small, and indeed decreasing, portion of vocational education funds; allows for a wide range of uses for these funds; and includes among these uses many in which recipients are likely to be involved independently of Federal activity. Consequently, most of the time they will be able to find appropriate uses for Federal money among programs they would in any case like to fund. Thus, however conscientiously States distribute Federal funds in accordance with Federal objectives, decision-making remains a largely local affair. This constraint is important to recognize in understanding the effects of Federal planning requirements, which for the most part concern State-level activities.

The New Planning Requirements and State-Level Planning Activity

The 1968 Education Amendments included a large number of planning requirements, specifying, in particular, the content of long-range and annual plans, such as descriptions of how the State provides for obtaining occupational information from public employment offices, and assurances that there be a reasonable opportunity for a public hearing on proposals. In 1976, testimony to Congress, and the resulting legislative changes, led to provisions such as these becoming far more specific about required activities.

More Comprehensive and Coordinated Planning

From GAO, the Congressional Committees heard a story of vocational education planning that emphasized failures. Vocational education planning, GAO charged. was not cooperative, not coordinated, not comprehensive, not systematic, not inclusive. It was a fragmented set of "multiple jurisdictions operating in virtual isolation"5 from one another, and the end result was overlapping and duplicative programs.

Testimony confirmed that multiple problems existed in the planning process. Representatives of postsecondary vocational education testified that the State agencies entrusted with vocational planning were oriented toward secondary vocational education. It was acknowledged that CETA, although a major provider of vocational training, was not involved in planning for use of vocational education funds. Increasing coordination among the deliverers of vocational education became one major theme of the new legislation.

The primary vehicle chosen by both House and Senate to bring about improvement in coordination and comprehensiveness was a broader base of participation in the planning process. The Senate Report referred to testimony asserting that:

> . . .improved broad-based planning was the solution to States' problems of overlapping and duplicatory vocational education programs.[6]

The House Report stated that:

> . . .the needs of all people within the States will be better served by this broad consultation in deciding how to spend Federal funds.[7]

The Senate report also stressed that public hearings be taken seriously to assure the "broadest possible involvement." Similarly, the Report pointed out that advice given by Advisory Councils on Vocational Education must be given serious consideration.

The base of participation was broadened in a specific way in order to bring about more coordination between and among the deliverers of vocational education and so achieve more comprehensive planning. It was also broadened in a general way to bring more actors and more agencies into the process as part of an attempt by Congress to open up the system and make it more sensitive and responsive to a wide variety of interests.

State Plan Committee. The major new vehicle for bringing about more coordinated planning was the State Plan Committee (Sec. 107(a)(1)). As mandated, this Committee is to include representatives from ten specified groups, four of them from the postsecondary community. The State Employment and Training Council (representing employment services at the State level) and the State Advisory Council on Vocational Education each have a seat on the Committee. Secondary vocational education has one formal position, and the last three positions are for representatives of local groups: vocational teachers, vocational administrators, and local school boards. The Act goes on to specify that the State

Plan Committee is to meet four times for the five-year plan, and three times for the annual plans, and lays down the agenda for each meeting. Thus, for the five-year plan the first meeting is to be held before the plan is developed; the second is to consider the first draft; the third is to react to a revised draft; and the fourth is to approve the final plan. Since State plans must deal with State and local as well as Federal expenditures, the Committee was designed to increase coordination in vocational education as a whole, not just in the case of Federally-assisted programs.

In the State Plan Committee, Congress has created an opportunity for advice and reaction from the main deliverers of services, but the State Board for Vocational Education is not required to follow the Committee's recommendations. In cases of disagreement, however, the State Board must include in the States' plans the recommendations made by any Committee members and reasons for their rejection. A dissatisfied party may appeal the decision to the Commissioner and ultimately to the courts for adjudication (Sec. 107 (a)(1)).

Congress envisioned the State Plan Committee as having a major effect on planning decisions in that it would bring about joint planning by the secondary and postsecondary sectors and CETA. This coordinated planning should serve two ends. First, it should result in the long run in a distribution of dollars between, for example, secondary and postsecondary programs,[8] which is appropriate to States' particular vocational education requirements. Second, broad-based planning should result in fewer "overlapping and duplicatory vocational education programs"[9] being offered.

What has been the effect of the State Plan Committee? First of all, as a result of this requirement, the key providers of vocational training do meet. In some States this is happening for the first time, while in others the State Plan Committee replaces or coexists with a committee of similar composition that was already in existence. However, in either case, since most members are unfamiliar with the formalities of the planning process, and the group meets only three or four times a year, the major development of the plan is still done by the State division of vocational education.

Consequently, in most States and in most years, the Committees have little substantive input to the State plan. Nonetheless, in some States participants have taken the opportunity afforded them to contribute to the plan, to voice dissatisfaction, or to claim a larger portion of Federal vocational education dollars. In several States, the postsecondary representative has used the forum provided by the State Plan Committee to argue that a larger share of Federal funds should go to postsecondary institutions. In one State, the discussion of postsecondary funding ended in acrimonious debate with a complaint to the Commissioner being filed. Whatever the outcome of the recommendations offered and debated, the requirement does provide for a forum, which members have taken advantage of in a few instances. Such a forum is a necessary condition for ensuring that coordination will take place, but not a sufficient one.

The State Plan Committee was also intended to be a place where, as well as preparing plans, the providers of services looked together at the training needs of the State and planned in a coordinated way to address these needs. The idea was to reduce program overlap and duplication, which presumably occur in the absence of joint planning. This end does not seem to have been realized. The Committees generally discuss only the uses of Federal funds, and there is very little evidence of joint, coordinated planning for the use of funds taking place.[10]

Public hearings. The other statutory provisions intended to broaden planning are public hearings and mandatory sign-offs (for example, by the sex equity coordinator and the State Advisory Council on Vocational Education). With the exception of the SACVE, the State Plan Committee is composed of providers of the services. By contrast, the public hearings offer an opportunity for comment from those outside the system and for vocational education to hear from and be accountable to its constituencies. Under the 1976 Amendments the State board is not bound to accept all views, but must list in the plan those views that were not accepted and justify their rejection (Sec. 107(a)(2) and Sec. 108(a)(2)).

In the fifteen case-study States, vocational administrators deemed the public hearings unsuccessful in attracting the general public whose views Congress apparently was seeking. In many cases, hearings were poorly attended despite appropriate publicity. In other cases, they were used by special interests within the system rather than by representatives of special needs outside of the system (disadvantaged, handicapped, women's groups). For example, in one State business teachers who were concerned about redefinition of business programs used the hearings as a forum to express their displeasure. In another State, the SACVE director, frustrated with the lack of information coming from the State board, appeared at a public hearing "to get some answers."

The requirement that views expressed at public hearings be included in State plans was seen as "more trouble than it was worth" by most vocational education administrators. In each of the preceding examples, however, it was most likely the assurance that the views must be recorded and responded to by the State agency that caused the hearings to be chosen as a forum by the complainants.

State Advisory Councils on Vocational Education. In addition to its role on the State Plan Committee, each SACVE is required to consult with the State board for vocational education concerning the overall conduct of the planning process and also has a sign-off function on the plan (Sec. 105). The 1976 Amendments included provisions which were intended to increase the Council's independence and change the composition of its membership, and so increase its contribution to the planning process.

SACVE directors generally saw that membership on the State Plan Committee was a valuable formal link with the planning process of the State agency. However, in ten of the 15 case-study States, the State Plan Committee membership and the sign-off were the only contact the SACVE actually had with the planning process. In five others, there was some additional role played by the SACVE. In two cases, separate meetings between the division of vocational education and the SACVE were held to explain the plan and get suggestions from SACVE members. In one State, the SACVE reported a great deal of informal coordination throughout the planning process. In the last instance, the SACVE, although not generally active in the planning, believed it had a major influence in causing the State division of vocational education to review and eventually change at least one important decision.

Given that the other major SACVE responsibility is evaluation, which requires it to perform certain "watchdog" functions, the relationship between some SACVEs and State agencies has become an adversarial one. This, in turn, hampers the SACVE in performing its assistance functions. Among the case-study States, six SACVEs were deemed to maintain an adversarial relationship with the State agency, and nine an assistance-oriented relationship. While not all assistance-oriented SACVEs were granted input to the planning process other than State Plan Committee membership and the plan review required by the statute, in no case did a SACVE which had assumed an adversarial role assist actively in the planning process.

Sex equity coordinator's sign-off. Reviewing the plan produced by the planning process is only one of the roles played by SACVE and the State Employment and Training Commission. It is, however, the only role played in the process by the sex equity coordinator who is not a member of the State Plan Committee. The requirement for this review represents another attempt, through the planning process, to make the system respond to a constituency. But it is unique in that the sex equity coordinator is the only representative of a special-need consitutency given a specified, though limited, function.

None of the sex equity coordinators in the sample States had refused to sign a State plan although some had requested changes, especially in wording. As one sex equity coordinator pointed out, "it would take something very big to make me refuse my signature. After all, I'm supposed to work in this place [the State agency] and within the system. It wouldn't be a constructive thing to do."

Planning Related to the Labor Market

The requirements. In response to the GAO finding that data necessary for planning related to the labor market were generally unavailable, inadequate, or unused, Congress took steps to make data more available and to make certain that they were used. Congress was particularly concerned about the "failure of vocational educators to be able to find and use reliable employment data when decisions were being made to initiate or to terminate programs."[11] The problem was not so much that the data did not exist, for the GAO found that every State it visited had some sort of labor market projections in its plans.[12] Rather, the problem seemed to be that State Directors considered the data unreliable and included them in the plan only to comply with Federal regulations. In no instance were the data in the State plan considered to be a valid assessment of employment needs. Another study found little linkage between instructional programs offered and occupations for which there was a projected demand.[13] It is also concluded that many local administrators did not even know about the published employment data available from State employment security offices and from the Bureau of Labor Statistics.

Congress, therefore, saw accurate occupational demand data as a crucial and missing link in the planning process. To fill this gap, the 1976 Act created the National Occupational Information Coordinating Committee (NOICC) with parallel committees in each State (SOICCs) to "implement an occupational information system in the State which will meet the common needs for the planning for, and the operation of, programs of the State board assisted under this Act and of the administering agencies under the Comprehensive Employment and Training Act of 1973" (Sec. 161 (b)(2)). It is important to note that NOICC and the SOICCs were given responsibility for establishing a data system for meeting common information needs and for coordinating data, but not for collecting new employment data.

Congress also intended planning decisions to be guided by information about how graduates of particular vocational programs were faring. The evaluation provisions (Sec. 112 (b)), which are discussed fully in Chapter V, ensure that data will be available on student placement in jobs related to their training and on the satisfaction of employers with them. Between these two sets of provisions--those creating NOICC/SOICC and those specifying the evaluation process--Congress intended to improve the quality and use of data in funding decisions. Congress wanted States and localities to be able to make sensible decisions in light of their particular set of conditions, but clearly intended the outcome of those decisions to be a greater match between skills taught to students and jobs available.

The effect of the requirements. All 15 case-study States now have a functioning SOICC, although in some cases only after long delays. Their effectiveness, however, varies, and depends on the length of the delay before they became operational, the data skills of the SOICC director, and the quality of data available in their State. The director is appointed by the Governor, and while some SOICC directors are familiar with data management, others are not. Similarly, States vary in the data they have available; and the SOICCs are not free to generate new data, but coordinate and systematize existing information.

Most States also now have a process for collecting data on placement of their students in occupations related to their training. This information is collected, for the most part by teachers, reported in VEDS, and used to justify program decisions in the local application for Federal funds submitted to the State. States are also required to include this information in their plans and accountability reports. However, as is discussed further in the next chapter, these data are also very variable in quality and coverage.[14]

Other factors and problems also complicate the use of employment data for vocational education planning. Recent studies[15] have found that planners and administrators at the local level often doubt the accuracy of statewide employment data. They point to two problems. First, State procedures for projecting local labor market demand vary. Some States project only for SMSA's; some project for selected labor market areas; and some project for counties. In many States, areas with low concentrations of jobs are missed entirely. Furthermore, although the Bureau of Labor Statistics requests State projections every two years, in practice the interval is often as much as four. Second, the use of State aggregated data leads to problems if used for local planning because they show supply and demand statewide, and such averages need not hold true for particular communities.

One State's experience illustrates this problem. A few years ago, this State adopted a policy of not funding occupations for which there was an over-supply in the State. On a statewide basis, welding was one such occupation. However, in certain localities welders were in high demand, and schools in these areas tried to get funds to expand their welding programs. The State stuck to its policy and refused to fund these programs. In the end, the State received so much criticism that it abandoned the whole policy. In its fiscal year 1980 plan, there is a list of occupations to be promoted (based on Statewide data showing shortages) but no "moratorium list" of occupations to receive no funding.

The nature of students' employment objectives further complicates attempts to match jobs with programs. Many students seek and find jobs in areas other than those in which they were educated. Others, as discussed further in Chapter VI, take a vocational course without intending to seek employment in that field immediately after graduation.

Finally, the effects of developing State-level data systems are limited by the local nature of most programmatic decisions discussed above. There are no arrangements for planning by region or by economic area in many States[16] and LEAs do not plan jointly. This problem is compounded by the fact that the boundaries of school districts and those of labor market areas or metropolitan areas--by which manpower data are organized--rarely coincide. The resulting situation is illustrated by the experience of one local school, which got the idea of offering training in the growing occupation of bank teller. The program was successful; graduates obtained jobs. Soon the surrounding districts caught on to the idea and offered bank tellers programs of their own, and soon the market was saturated with graduates in search of banks.[17]

In making their decisions, school districts and other institutions face strong pressures to retain current programs, particularly if there is student demand. In fact at the secondary level, student demand is likely to be a primary determinant of program offerings, although at the post-secondary level, job availability usually plays a stronger role.[18] While they would generally use local or State rather than Federal funds, secondary school administrators would be disinclined to discontinue an agriculture or an auto mechanics program for which there was reasonable student demand, even though jobs in these areas might not currently be available in the district. Nor do States have much ability to influence these decisions. Only in a very few is there any central control over the general program decisions made by localities.[19]

These factors do not mean that employment opportunities are disregarded in making program decisions, but rather that they are by no means the only influences and that local administrators have greater faith in less formal, ear-to-the-ground information on job availability. The desire to use the data, on the one hand, and the skepticism about this information, on the other, are reflected in the advice given in a technical assistance handbook on planning put out by the National Center for Research in Vocational Education:

> The very worst approach to planning is to ignore other input and make absolute, irrevocable decisions based on employment data. A second bad approach is to ignore employment data completely. Somewhere between these two approaches is one where the planner establishes plans which are reasonable in light of the best currently available employment data and which are flexible enough to allow for possible revision when new or better employment data are obtained.[20]

The effects of the new requirements for occupational demand and placement data reflect this position. At present, they are only partially implemented, but have the potential to generate data of use to planners. However, the limitations of the data and the way in which program decisions are made means that they may not produce large and clearly identifiable changes in the degree of match between jobs and programs.

More Substantive Planning and Streamlined Planning Documents

The documents requirements. The requirements for planning documents in the 1976 amendments were also drafted in reaction to GAO findings. They rest on the assumption that good planning documents could be produced by the States and on the conviction that until now they had not been.

Both the Senate and House Committees agreed that the problem with State plans prior to 1976 was that they were "compliance" documents.

The House found that

> ...State plans are primarily prepared to comply with Federal regulations and are not used to provide direction to programs,...[21]

The Senate report emphasized that

> ...the document submitted by the States was not a planning document, but rather was a "compliance" document. By this, witnesses meant that the materials submitted were the paperwork necessary to comply with the face of the statute, but did not reflect the planning effort undertaken by the State to determine its vocational education program for the year, or the basis of such a determination.[22]

These Committees had an idea of what characteristics or traits a plan must possess to raise it above the level of a compliance document. The two quotations above indicate that such a plan would be used "to provide direction to the programs" and would show the basis of a determination made by the State as to its vocational programs for the year. Elsewhere, the Senate report says that a comprehensive planning document is one which "reflects a State's assessment of its needs for vocational education, taking into account populations to be served, job markets to be met, regional distribution, and special needs."[23]

In defining the type of document it wished to elicit, Congress emphasized the need to reduce the amount of unnecessary, unneeded and unused paper currently being submitted, adding that

> ...a mound of paper is required to be prepared at the State level and transmitted, through the Office of Education regional offices, to Washington. The Committee bill seeks to cut down substantially on this unnecessary paper flow.[24]

> The net result of all these requirements is that a tremendous amount of unnecessary paper flows into Washington annually--paper which takes hundreds of man-hours to prepare and which is of little practical use to program administrators at the State or Federal level. Indeed, the Committee has serious doubts that any employee of the Bureau of Occupational and Adult Education even reads the material, other than to assure that all the blanks are filled in.[25]

The paper was to be reduced by dividing the State planning requirements among three documents, only one of which needed to be submitted annually. They are:

- the general application containing the "boiler plate," administrative provisions and routine assurances made once and kept on file with the Commissioner (Sec. 106),
- the five-year plan containing the essentials of meaningful planning--an assessment of current and future job skills, State goals for meeting the need for these job skills, deployment of Federal, State and local vocational education funds to enable the States to realize these goals (Sec. 107(b)), and
- an annual plan which amends or updates the five-year plan[26] (Sec. 108). Congress wanted to reduce the paperwork, so that only the most "streamlined planning document" would be submitted annually.[27]

The effect of the documents requirements. An examination of the documents shows that the "mound of paper" has been reduced somewhat, but that paper work is still plentiful. The fiscal year 1979 annual plans are shorter than those prepared in fiscal year 1977--37 percent shorter for eight States reviewed[28]--but are still lengthy, often 100-200 pages. Thus, annual plans are still not documents, anyone would call "streamlined." Furthermore, overall paperwork, although distributed among more documents, may have actually increased. One State pointed out that to get fiscal year 1980 funds, it had to submit a one-inch thick annual plan, a one-inch thick accountability report, and a half-inch thick update to the five-year plan.

Congress was concerned not only with the volume of paper but also with content and utility. If not more streamlined, are plans more substantive or do they still appear to be compliance documents? Substantive planning documents presumably should set forth goals that are formulated in light of student and labor market needs, and they should also reflect a strategy for meeting the goals. The plans do contain the required elements--labor market demand data, student supply data, goals, programs, and enrollments. However, they lack cohesion both across the pieces and across levels (postsecondary and secondary). In many plans tables presenting these data are listed separately, with the verbal glue needed to hold the elements together missing. For example, a reader can presume that the goals were formulated in light of labor market data or student needs, but most plans do not say so.

Many observers say, however, that planning ability at the State level is greater than the documents indicate.[29] The States recognize the value of good planning and do a substantial amount of it. However, "planning" and "plan production" are two different processes in most States. In most cases one individual or group is assigned the responsibility for writing the plan. Planning decisions are usually made elsewhere as part of a continuing process in which State personnel discuss priorities and desired projects with locals, and reach agreements and compromises based on available finances, prior commitments to staffing and programs, and the like.

The 15 case-study States were unanimous in their belief that the primary purpose for the preparation of State plans was to serve as a basis for measuring compliance. Since their Federal funding was dependent on the acceptance of their State plans, this concern overrode all others in the preparation of plans. The major desired outcome of the mandated planning process at the State level was a document which would be acceptable to the Federal government and successful in securing the release of Federal funds. As a result, the planning documents produced are rarely used at the State level. States speak of the "real" plan, which usually is a detailed set of operating procedures, sometimes written down in a single document, sometimes not, and the "compliance" plan which is sent to Washington and not referred to thereafter. Nor are the full annual plans used very much at the local level. Most States, believing that the annual plans do not communicate their goals and plans well or concisely enough, write a different and shorter version of plans which they distribute to the local level.

The Federal level, then, is the one for which the plans are written and the one at which they are used. BOAE gives the plans a very thorough review and uses the plan review process as a key aspect of its monitoring for compliance. Thus, whereas the plans produced before 1976 were not serving anyone's needs,[30] the current plans are serving primarily Federal needs, and only to a far lesser extent State and local needs. They are documents produced by the States to prove compliance with Federal legislation and are used by the Federal analysts to monitor for compliance.

Effect of Consolidation on State Planning

At the same time that requirements for planning were made more restrictive, programmatic constraints were made less so. In

1976 nine categorical programs were consolidated into four broad Subparts, allowing the States, in theory at least, greater flexibility in decision making within the legislatively established boundaries.

State officials generally indicate that despite grant consolidation overall flexibility in decision making has not increased because restrictions elsewhere in the Act constrain their decisions. They point out that the mandated distribution criteria essentially dictate where Federal money should go within the State and many state that the new and more demanding matching requirements for the set asides, discussed in Chapter III, have tied up much of their uncommitted money.

However, as was also discussed in the previous chapter, they do have flexibility in recategorizing the basic grant. States can and do reserve portions of the basic grant for particular purposes (e.g., new programs, equipment, maintenance, work study or cooperative education) for types of institutions (e.g. comprehensive high schools) or levels of education (secondary, postsecondary). The funds in any given reserves, or "funding pools" as they are often called, go out to applicants according to the funding criteria. Nonetheless, States express their priorities through their choice of reserves and communicate these priorities to LEAs in informing them of the purposes for which they can apply for funds.

Appendix B provides a detailed discussion of how four States use Federal funds to meet their priorities and needs. The patterns are variable and can be intricate. To summarize, one State funds only postsecondary programs with Subpart 2 funds and categorizes them into pools for "equipment," "new programs," and "ongoing programs." The second State funds secondary programs (with the exception of postsecondary institutions funded with the set aside) and categorizes these funds into two pools for area vocational centers and for comprehensive high schools. Within these categories, funds are further subdivided and reserved for particular program types. The third, and most complex, recategorization scheme begins by dividing funds into two pools, one for secondary and one for postsecondary institutions. The postsecondary pool is divided into two categories, one for regular postsecondary programs and the other for adult programs. The secondary pool is further divided among six purposes: continuing secondary programs; adult programs; equipment; local travel; postsecondary programs in secondary schools; and new programs. The fourth State first sets up a secondary and a postsecondary reserve and then further divides the secondary reserve into programmatic categories.

It is obvious that some States are exercising the discretion afforded them and that there is considerable variation in the type and number of categories chosen and presumably in the dollars within them. Together, these decisions can influence heavily where Federal funds go and, to some extent, their uses.

Federal Review for Compliance

Both the House and the Senate were harshly critical of BOAE's monitoring of State activities. The House characterized Federal behavior as "slovenly and irresponsible,"[31] and the Senate Report, in speaking of BOAE's review of plans, says that "there are substantial indications that no one in the Office of Education even bothers to read through an entire State plan to ascertain whether it substantively meets the intent of the law."[32]

Congress therefore introduced new requirements intended to improve Federal oversight and enforcement of the statute. In addition to provisions requiring Federal review and audits, the 1976 Amendments specify in greater detail than pre-existing legislation the contents of annual accountability reports which the States must prepare and submit in addition to their plans (Section 108). As well as describing exactly how Federal funds were distributed among local school districts in accordance with the funds distribution requirements, each State's accountability report must show the extent to which it has achieved the objectives set in the Five-year Plan, and how far actual and planned uses of Federal, State and local funds have been in accordance with the plan. Congress also required the Commissioner to review both the plan and the accountability reports and to put the comments in writing (Sec. 109). The Senate explained that, "By requiring the specific findings to be put in writing, the Committee intends to make sure that some Federal official actually reads each State's annual program plan and makes some substantive judgment that it meets the requirements of the Act."[33]

The HEW Regional Offices had responsibility for reviewing the plans and accountability reports until 1978, at which time these functions were centralized and lodged in a new division, the Division of State Vocational Planning Operations (DSVPO) in BOAE. The leadership in that Division recognized that the Office of Education had been given very clear orders by Congress to strengthen its monitoring of States and, therefore, set out to make the plan review process a rigorous monitoring of compliance with the Act.

The review process instituted was intended both to strengthen and standardize the review process. A frequent criticism from the

States was that the stringency of review as well as interpretation of the statute varied with reviewer and region. The standardization was accomplished, in part, by issuing detailed "checklists" against which plans and accountability reports from all States were to be reviewed. These checklists, mentioned above in the context of funding formula review, go through the law and regulations, section by section, and set forth the criteria by which compliance with the particular section is to be judged. The process of writing and issuing Policy Memoranda, which formally raise and resolve questions, also increased the standardization of analysts' reviews.

These moves have had effects. Standardization in review is greater now than when it was carried out in the regional offices, and the policies and procedures are explained more uniformly across branches. However, variation among reviewers and branches still persists, for the most part in the interpretation of issues, which have not been resolved in Policy Memoranda. The "checklist" reviews and careful attention to all requirements have also, however, involved substantial costs. There has been a cost in time. Reviewing plans for compliance is a time-consuming process. Reviewers in BOAE often need to ask the States for additional information before a judgment about compliance can be reached. Because a large number of sign-offs, assurances, and the like are required by law, some States each year omit one or another piece of paper and, consequently, approval of their plans is held up. Large amounts of time are spent on correcting omissions and gathering information by both Federal and State personnel, at a time when the school year in question is already underway. Some of this activity is reminiscent of the pre-1976 situation which the Senate Report castigated as merely a check "that all the blanks are filled in."[34] Typically, States receive plan approval well into the fiscal year, usually about October. Quality reviews have often arrived in March or April, by which time the next year's plan is being finalized. The chronology of events, shown in the following example of one State's fiscal year 1980 plan review, illustrates the timelines as well as the complexity of the Federal review.

There has been a cost in focus, as well. State people speak of the "compliance mentality" in Washington. BOAE reviewers check for strict compliance with a plethora of routine matters, such as whether all the sign-offs are in place in the State. From the State perspective, the emphasis is on compliance with minutia: on the letter of the requirements to the virtual exclusion of the spirit. For example, one State submitted in its five-year plan actual enrollments and actual labor market data for fiscal year 1978. The projections for the following four years were calculated by increasing every number by five percent. The planners in that State realized that this was a clumsy, if not invalid, way of deriving projections, but the plan had to be produced in a short amount of time and under conditions of great uncertainty, since the regulations had not been issued in final form. When BOAE analysts reviewed the plans, they asked to see tables showing supply and demand data by six-digit occupational codes for the five years, tables showing enrollment by these codes for the same period, and the like. Mere presence of these was sufficient for the plan's discussion of job skill needs to be judged satisfactory. Questions about the quality of the information or ways in which it was used to set goals or plans were never raised.

Finally, there has been a cost in sheer dollars. The plans are enormously costly documents to produce, and most States will say that the attention and resources they demand exceed their utility. Illinois estimates[35] the cost of the five-year plan to be $237,000 and the cost of the annual plans to be $122,000 each in fiscal year 1977 and fiscal year 1978. Florida estimates[35] the cost of the five-year plan to be $175,000 and the cost of the fiscal year 1977 and fiscal year 1978 plans to be $88,000 each. North Carolina estimates[35] the cost of the

BOAE STATE PLAN REVIEW PROCESS FOR STATE X -- FY 80

1979

March 1	o State submitted draft of Annual Program Plan, FY 80, and Accountability Report, FY 78.
	o Draft reviewed--comments made to the State. Asked for clarification (phone call) (written comments to file).
	o State responded. Not all responses acceptable. Asked for revisions (phone call) (written responses/reactions to file).
March 23	o Made arrangements for technical assistance visit and asked for explanation of fund distribution process (phone call).
April 23	o State submitted explanation of fund distribution process (secondary formula). Written reactions to this submission (for files). Gave a copy to State to use as a working copy.
May 1 - 3	o Technical assistance visit. Discussed revisions and fund distribution process at secondary and postsecondary level. State submitted revised Appendices.
	o Our reaction to visit (written comments in file).
May 17	o State and OE staff met in Washington, D.C. Postsecondary formula completely out of compliance. Secondary formula required minor changes.
May 21	o State sent a written summary of meeting (copy on file).
May 24	o State asked about "substantially approvable" status without postsecondary formula (phone call)--not possible.

State Plan Review Process - FY 80

June 5	o State submitted revised secondary and postsecondary formulas (files).
June 26	o Received Plan and Report.
June 27	o Compliance review--Accountability Report. (Checklist)
July 2	o Reviewed, with State, each item that needs revision--Accountability Report (phone call).
July 3	o Received amendment to postsecondary section and required certificates.
July 6 - 11	o Compliance review - Plan (Checklist).
July 9	o Reviewed, with State, changes required to obtain "substantially approvable" designation (phone call).
July 11, 13, 20	o A number of revisions were sent by State (files).
July 26	o Substantially approvable designation (files).
July 27 - 29	o Peer review (checklists).
July 31	o All revisions submitted for compliance were approved, except formula and postsecondary section (phone call).
August 15	o Deficiency letter (on formulas) sent to State (files).
August 23	o Clarified one item on deficiency letter (phone call).

State Plan Review Process - FY 80

September 6	o (Phone call) - [a State official] feels he can distribute postsecondary funds without formula. (Phone call) - [Another State official] stated revised copies will take care of OE's request.
September 18	o First set of revisions to deficiency letter submitted. Reviewed and not completely approvable. (Files.)
October 10	o States Workshop. Met with State staff and discussed revisions submitted on September 18 (written comments on file).
October 11	o States Workshop. Met with State staff and discussed postsecondary section (written comments on file).
October 17	o Clarified some items discussed at workshop. (Phone call.)
October 26	o Second set of revisions to deficiency letter submitted (files). Reviewed revisions; still not in compliance.
November 5	o Notified State about problems with postsecondary section. State requested written letter stating problems.
November 16	o Requested letter sent to the State. Hopefully "last" revision to postsecondary formula (files).
November 31	o Third revision to postsecondary formula submitted. Reviewed and found in compliance (files).
December 3	o Plan and Report recommended for approval. Sent transmittal letter (files).
December 5	o Commissioner approved Plan and Report (files).

December 5 - 10	o Quality review written.
December 17	o Grant award mailed to State (files).
December 31	o Quality Review mailed to State (files).

five-year plan to be about $120,000 and the cost of the fiscal year 1978 plan, which involved the work of two full-time professional staff and some support staff, to be about $60,000. In addition to the development costs at the State level, the cost of reviewing them at the Federal level is also significant. The DSVPO records show that, in fiscal year 1979, plan review consumed 5,370 person days, an average of 96 days per plan.

Against these costs must be set the fact that the plans and accountability reports provide a mechanism for enforcing specific Federal requirements. For example, BOAE has used the planning information submitted by the States to require them to establish programs for displaced homemakers, or to show a set-aside for persons of limited English-speaking ability. As described in Chapter III, State plans which do not include a complete description of the method used to allocate funds or show that statutory criteria are used in the requisite manner are not approved.

The plans and accountability reports are much less successful as a way of providing Federal assistance with, or checks on, a State's achievement of more general goals, and the design and content of programs. The correspondence between BOAE and the States during the early part of the year is centered almost entirely on compliance issues related to concrete statutory requirements, and on obtaining the particular assurances or figures required for plan approval. Only in the evaluative "quality reviews,"[36] which often go out more than half-way through the fiscal year, are issues of substance addressed and then, inevitably, in a largely reactive way. Technical assistance is not a priority, and BOAE seeks to bring States into compliance through heavy oversight, not assistance.

Congress' perception in 1976 was of an agency that did not take its compliance and enforcement responsibilities seriously. This perception is no longer true. BOAE has put great emphasis on both plan review and on-site monitoring for compliance--to the exclusion, indeed, of technical assistance. However, despite the enormous energy that goes into monitoring, the payoff may not be great. In some cases, such as setting up programs for displaced homemakers, Federal requirements are precise, and a check to see whether the letter of the law is complied with is also a check on the desired outcome. In other cases this is not true, either because requirements which in principle could have clear measurable outcomes are ill-defined, as with the funding formula requirements discussed in Chapter III, or because Federal objectives are general, and the results of provisions difficult to define and measure. The planning and employment data requirements discussed in this chapter are of the latter type. Federal reviewers far removed from the level of decision making may determine or ensure that procedures and administrative bodies, such as the State Plan Committees, are established which are in strict accordance with statutory requirements, without furthering desired outcomes, such as reduced duplication or overlap of programs.

Capabilities and Limitations of Planning

The preceding section has discussed the major specific mechanisms of the legislation, the way they operate, and with what consequences. This section considers the question of how well this set of mechanisms, taken as a whole, has served to make the planning of vocational education at the State level more coordinated and comprehensive.

The mechanisms have been installed and appear to be operating. Yet, the changes in the system have been small and difficult to link causally to the 1976 requirements. On balance, there is little evidence of planning mechanisms leading to reductions in program duplication and overlap or of program offerings being more closely related to labor market conditions. Much of the planning for postsecondary and CETA programs continues to happen apart from secondary vocational education planning. In explaining these limited results, the nature of the Federal program, the nature of State control over decisions, the nature of local applications and the nature of the of the planning process itself must all be considered.

The Federal Program

As noted earlier, Federal funds can be used for a wide variety of purposes and, in most States, provide for only a small proportion of expenditures compared with State and local funds. Consequently, it is likely that some of the things which a LEA would want to fund anyway will be in line with Federal purposes. For example, suppose a LEA wanted to expand or initiate a particular program for which there was a shortage of workers, and at the same time maintain a series of agriculture courses with reasonable student demand but low placement rates. The LEA could apply for Federal funds for the first purpose and use State and local for the second. In such a situation, Federal funds are used appropriately but have little power to create changes in the system.

State Control Over Decisions

Most of the Federal planning provisions call for State-level activities, yet many of the decisions that would serve to implement a State plan are beyond the control of the State agency. Even the basic decision on whether to submit to the State an application for Federal funds rests on local initiative. Furthermore, a number of key programmatic decisions are controlled at the local level and are not made by State agencies. These include not only decisions on day-to-day operations but also most decisions on whether programs are to be continued, initiated, or terminated. Furthermore, the decisions which determine the level of funds--Federal, State, and local--available to implement the plan are out of the control of the State agency. Federal and State appropriations may fluctuate unexpectedly, local bond issues may not pass. Any of these would call for modification in the plan.

Certain decisions of considerable importance--primarily those which deal with the allocation of Federal funds--are, of course, the responsibility of the State agency. These funding decisions are made traditionally in light of prior and continuing commitments to existing previously-funded programs which the State agency considers important enough to be maintained. The requirement that Federal funds be distributed by formula has introduced new constraints on State funding decisions at the same time as the 1976 consolidation measures reduced old ones, but priorities can be and are expressed by the division of funds into "pools" for particular purposes as well as by the distribution procedures.

States could, in theory, take a stronger stand and disapprove local applications. They prefer, in fact, not to act coercively but through technical assistance, monitoring, evaluation, and other means to encourage and persuade eligible recipients to move in the desired direction. Rarely do States apply the ultimate sanction, denial of Federal funds, to force compliance.

Local Applications

If most substantive planning and decision making take place at the local level, then local applications for Federal funds are especially important mechanisms for achieving Congressional ends. The Vocational Education Act requires that local applications list the types of activity which its provisions attempt to encourage directly at the State level; for example, that it show how proposed activities relate to local CETA programs, and that it be developed in consultation with other concerned local bodies, and with the local advisory council. However, a review of the local applications used in fourteen[37] of the fifteen case-study States reveals a number of shortcomings.

- Only one State required the applicant to describe how the representative of education and training agencies in the area served have been involved. (Four did not require any assurance to this effect from LEAs.)

- Thirteen of the fourteen States required an assurance that advisory council members had been involved in preparing the local application. However, only a few States required that the application describe how the LACVE had been involved.

- Eleven States required the applicant to give assurance that the results of evaluations had been used to develop the proposed programs. Only four States required the applicant to describe how this was done.

- Only one and four States, respectively, required the applicant to describe (1) how the proposed programs related to area CETA programs; and (2) the relationship between Federally-and State-or locally sponsored programs.

- Only six States required the local applicant to describe narratively the needs of students to be served. Most States, however, collected data on student enrollments and courses offered.

- While most States required that programs supported with VEA funds be related to realistic employment opportunities, only one State required the applicant to describe the local economic or employment situation. Many States, however, required the LEA to collect and analyze these data through a variety of methods including employer surveys, and labor market projections available from the United States Employment Service, the Chamber of Commerce, and local employer contacts.

With the exception of a few LEAs (usually large, and usually suburban), planning takes a subordinate place to budgeting at the local level. Local budgets are drawn up annually and funded almost entirely with local and State entitlement funds. Most LEAs will, in addition, apply for several categorized or special purpose funds such as Federal educational funds. The 1976 legislation seems to ask for a local application that is really a comprehensive plan showing objectives which drive expenditures. This is not what local applications do in most cases, nor is it how local decisions are made.

Planning in Vocational Education

There is no Federal vocational education program, in the same sense that there is a separate Federal Title I (ESEA) program. The vocational education enterprise includes both programs of training for new and emerging occupations, taken usually by students who want to get jobs in these fields immediately after completion, and courses in auto mechanics, taken usually by students who want to know how to work on their own cars, and do not necessarily want to be auto mechanics. Some of its offerings are in line with the priorities expressed by Federal legislation. Others are not.

Federal involvement in vocational education has purposes beyond the funding of a limited number of programs with Federal dollars. They are to make the enterprise as a whole more responsive to the labor market, more attentive to the needs of women and special populations, and more efficient and attentive to coordination with related agencies. Congress has seen the attachment of planning requirements to Federal grants as a way to make some of these things happen. But, because of the nature of planning, it is difficult to create substantive activities through legislation, and often impossible to define appropriate and measurable outcomes and to know whether "good" planning is taking place or not. For example, "good" planners should take account of student placement rates in determining whether to fund programs; but other factors are important in making programmatic decisions. It may be perfectly appropriate in certain cases to fund programs for which there are low placement rates.

SUMMARY

Planning requirements in Federal vocational education legislation are not new and have long been viewed as important means to increasing system-wide compliance with Federal policy objectives. Thus, when Congress, prior to its formulation of the 1976 Amendments, was presented with evidence about defects in the planning process for the vocational education enterprise, defects which were implicated in the failure to reform the enterprise, it acted to strengthen planning requirements and to increase flexibility in planning decisions. A discussion of the 1976 planning requirements must therefore be approached from two angles: whether or not these requirements have been implemented, and whether or not they have served to further the achievement of Federal goals for vocational education. The first issue can be addressed with some confidence; a discussion of the second is based on an examination of their effects only three years after passage of the Act and, therefore, is tentative.

The 1976 planning requirements had three major purposes. First they sought to bring about more comprehensive and coordinated planning--that is, increased participation in planning and reduced program duplication and overlap--through creation of State Plan Committees comprised of 10 members representing secondary and postsecondary education groups, the State Employment and Training Council, and the State Advisory Council on Vocational Education (SACVE), as well as local level groups; through public hearings on the plans; and by stipulating various approvals and sign-offs. Second, Congress wanted planning to take better account of labor-market data, and accordingly, it created the NOICC with parallel committees in each State (SOICC) to coordinate and systematize such data, and required plans to be informed by evaluations of vocational student placement and employer satisfaction. Finally, Congress sought to reduce the paperwork burdens of the States and to increase the substantive nature of the plans.

States were further instructed to distribute Federal vocational education funds on the basis of local applications that demonstrated a similar planning process. Local agencies were therefore expected to plan in conjunction with local education and training representatives. Local applications must describe: (1) the vocational needs of potential students and how the proposed program will meet those needs; (2) how evaluation findings have been used to develop proposed programs; (3) how proposed activities relate to CETA employment programs in the area (if any); and (4) the relationship between programs proposed for Federal funding and programs supported with State and local funds.

The provisions of the Federal planning requirements are largely in place. The State Plan Committees are operational, public hearings are conducted in the States, NOICC and the SOICCs have been established, and student placement data are generally available. In addition, since nine categorical programs were consolidated into four broad subparts, States have, in theory, greater flexibility in planning decisions.

However, although the mechanisms have been installed and appear to be operating with some success, the changes in the system have been small and difficult to link causally to the 1976 Amendments. For example, much of the planning for postsecondary and CETA programs continues to happen apart from secondary vocational education planning. There is also little evidence of programmatic decisions being more in tune with labor market conditions because of SOICC or improved student placement data. In explaining these limited results, the nature of the Federal program and of State control over local decisions must all be considered.

Federal involvement in vocational education has purposes beyond the funding of a limited number of programs with Federal dollars. The intention is to make the enterprise as a whole more responsive to the labor market, more attentive to the needs of women and special populations, and more efficient and attentive to coordination with related agencies. Congress has seen the attachment of planning requirements to Federal grants as a way of accomplishing these purposes. It is for this reason that State plans must include documentation of the proposed uses not only for Federal but also for State and local funds.

However, although Federal planning requirements extend to both the State and local levels, Federal funds can be used for a wide variety of purposes. Moreover, in most States, Federal funds provide only a small share of vocational education expenditures, as compared with State and local funds. States may communicate Federal goals to local agencies through their involvement with local planning, either at the stage of plan preparation, review, or technical assistance and monitoring after review. However, State leverage over locals is also limited, constrained both by the tradition of local autonomy and by the Federal formula. State influence is particularly weak in respect to local decisions about vocational education programs funded with local or State general aid monies. Consequently, a LEA could apply to the State for Federal funds for activities in line with Federal purposes and also use State and local funds for other purposes. In such a situation, Federal funds would be used appropriately, but have little power to create change in the vocational education enterprise as a whole. Ultimately, then, the decisions that in large part determine the nature of the vocational education enterprise are in the hands of local agencies, while Federal planning requirements designed to reform the enterprise are directed largely at the States. It is in this context that the effectiveness of the 1976 planning requirements must be viewed.

Federal enforcement activities were considered important devices for ensuring vocational education reform. Both the House and the Senate were critical of BOAE's (now OVAE's) past monitoring of State activities and introduced new measures intended to strengthen enforcement of the statute. BOAE has been very vigorous in its review of State plans. Plans are now reviewed against a detailed "checklist" of key provisions in the regulations. However, despite the enormous amount of energy that goes into plan review, the payoff may not be great because BOAE analysts check whether paper plans comply with the letter of the law and not whether a State's vocational education system is fulfilling Federal goals.

This chapter has sketched the way in which States have responded to the planning requirements in the 1976 legislation and the way in which the agency that has oversight of the process has discharged that responsibility. It reports that although the mechanisms have been installed and are operating, the system has been little changed as a consequence. This does not necessarily indicate a flawed statute; instead, the situation seems to be that the mechanisms are necessary but not sufficient conditions for change. Furthermore, this reading was taken in school year 1979-1980, only three years after enactment of the 1976 Amendments. It therefore remains to be seen whether this kind of planning can be attained in a system as decentralized as vocational education and whether the mechanisms--more open, coordinated planning and an improved information base--are sufficient conditions for realization of Federal goals.

FOOTNOTES

1. U.S. Congress, Senate, Committee on Labor and Public Welfare, *Education Amendments of 1976: Report to accompany S.2657*, S. Report No. 94-882, 94th Congress, 2d Sess., May 14, 1975, p. 66.

2. U.S. Congress, House, Committee on Education and Labor, *The Vocational Education and National Institute of Education Amendments of 1976: Report to Accompany H.R. 12835*, H. Report No. 94-1701, 94th Cong. 2d Sess., September 27, 1976, p. 12.

3. This section draws upon case studies in 15 states and review of planning documents for all States performed under contract by Abt Associates, Inc. and upon in-house research.

4. About ten years ago, the Office of Education was encouraging comprehensive planning across LEAs within a state. Many States adopted the idea and set up regional planning units. These units were also administrative units: funds were allocated to them, they planned for fund use, and they disbursed the funds. After the passage of the 1976 legislation, many of these States continued to reallocate funds to the regions as before, despite new funding criteria. Pennsylvania was one such state, and this method of fund disbursement was one basis of a complaint filed by the Legal Defense Fund against the State, a complaint which was upheld by the Office of Education. Requirements are that money flow on a basis of funding criteria to local applicants. Regional units may still exist and may plan; funds may even pass through them on the way to locals. However, the States will say that funding requirements in effect take planning out of the hands of the regional units.

5. U.S. General Accounting Office, *What is the Role of Federal Assistance for Vocational Education?*, Report of the Comptroller General to Congress. Washington, D.C.: U.S. Government Printing Office, December 1974, p. 25.

6. Senate Report, *op. cit.*, p. 60.

7. House Report, *op. cit.*, p. 36.

8. Secondary funding was "held harmless" for the first two years. Shifts in funds, if any, would first be seen in FY 80.

9. Senate Report, *op. cit.*, p. 60.

10. H. Starr, C. Maurice, H. Merz and G. Zahniser, *Coordination in Vocational Planning - Barriers and Facilitators* (Columbus: The National Center for Research in Vocatonal Education, 1980). Speaking of coordinated planning at the State level, the authors reported that it had not been achieved and discussed barriers which impede the achievement of statewide coordination in planning (p. 12).

11. House Report, *op. cit.*, p. 19.

12. *Ibid.*, p. 19.

13. Drewes, D.W., and Katz, Douglas S., *Manpower Data and Vocational Education: A National Study of Availability and Use* (Raleigh, N.C.: Center for Occupational Education, North Carolina State University, 1975), quoted in House Report, *op. cit.*, p.19.

14. Harold Goldstein, "Future Labor Market Demand and Vocational Education," Paper prepared for the Vocational Education Study, National Institute of Educaton, July, 1980, (Mimeographed.), gives a detailed discussion of inaccuracies and shortcomings of the data as do Starr et al., *op. cit.* Goldstein believes that there is a reasonable expectation that the quality of the projections can be improved if data collection (like occupational employment statistics and occupational mobility surveys) continue and as research into methods yields results, p. 60.

15. Found by Abt Associates, Inc., in their case studies in 15 States and by Starr et al., *op., cit.* Starr et al. reported that many of those placed in the role of data consumers often doubted the accuracy and/or usefulness of the employment data that were provided to them by data suppliers. Specific viewpoints on the data heard during the course of extensive local interviewing were: "(a) lack of correspondence between available employment data and local needs, (b) there are differences in usability and availability between urban and rural areas; and (c) there are contradictions between data that are available to local schools and experiences of vocational graduates in the labor market." p. 22.

16. Goldstein, *op. cit.*, p. 59.

17. *Ibid.*

18. Starr et al., op. cit., p. 22.

19. Goldstein, op. cit., 55.

20. Harold Starr, Developing State Plans for Vocational Education (Columbus: National Center for Research in Vocation Education, 1980), p. 64.

21. House Report, op. cit., p. 16.

22. Senate Report, op. cit., p. 66.

23. Ibid., p. 67.

24. Ibid., p. 66.

25. Ibid., p. 69.

26. The Education Amendment of 1978 amends the General Education Provisions Act (GEPA) to require three year plans for all educational programs, including vocational education. The first three year plans would cover FY 80, 81, and 82--the last two years of the current five-year cycle and one year beyond, for which vocational education legislation does not exist. BOAE initially made three year plans mandatory, but later reversed itself, and currently allows States to choose between submitting a three-year plan and continuing to submit the usual annual Program Plan. States are doing both, creating some confusion in the review process.

27. Senate Report, op. cit., p. 66.

28. Illinois, Texas, Oklahoma, North Carolina, Colorado, Arizona, Arkansas, Alabama.

29. Found by Abt Associates, Inc., in their case studies in 15 States and by Starr, as part of a study of planning (personal communication).

30. Senate Report, op. cit., p. 66.

31. House Report, op. cit., p. 29.

32. Senate Report, op. cit.,p. 75.

33. Ibid., p. 75.

34. Senate Report, op. cit., p. 69.

35. Estimates supplied by the State Director in all cases.

36. The quality reviews deal with major themes such as planning, data utilization, equal access, set asides and special populatons, CETA coordination, evaluation and accountability, fiscal aspects, program improvement, and the like. The comments are usually procedural, but they afford BOAE the opportunity to reinforce Federal priorities either in describing strengths or weaknesses (e.g., you have failed to define the needs and interest of minorities for vocational education services).

37. One State did not include a local application in its plan.

CHAPTER V. THE EFFECTS OF THE 1976 LEGISLATION UPON STATE EVALUATION

The 1976 Amendments to the Vocational Education Act introduced major new requirements for the evaluation of Federally funded vocational education programs, in addition to the new funds distribution and planning requirements discussed above. Pre-existing legislation included the general requirement that Federal funds were to be distributed with "due consideration . . . to the results of periodic evaluations of State and local vocational education programs, services, and activities in light of information regarding current and projected manpower needs and job opportunities . . . ." (P. L. 90-576, Sec. 123(a)(6)(A)). However, Congress discovered during hearings for the 1976 Act that, despite this provision, funds were being distributed with little consideration of evaluation results, in part because of the "lack of systematic programmatic evaluation ."[1]

The General Accounting Office (GAO) reported that enrollments in programs supported by Federal funds did not indicate a shift from traditional programs to programs designed to meet new and emerging job opportunities, and that this was in part because evaluations were not providing systematic follow-up data on students, or showing job placement.[2] In the absence of this information, decisions on which programs to support were often made without considering the ability of students from those programs to get jobs. GAO reported, further, that the Office of Education was making only a marginal effort to review vocational offerings in the light of job opportunities.[3] Other evidence also indicated that, once a program began, local job opportunities typically played only a minor role in whether or not it continued.[4] GAO recommended that Congress strengthen the evaluation requirements by requiring schools to take responsibility for the follow-up of students.

Congress took the advice and enacted greatly strengthened evaluation requirements. These requirements, which originated on the House side, are one of a cluster of requirements designed to bring about more informed and more rational planning. Others in the cluster are the planning, accountability, and data collection requirements, as well as the requirements which set up National and State Occupational Information Coordinating Committees (NOICC/SOICC) to coordinate labor market supply and demand information. It is through this cluster of requirements, as they come together in the planning process, that Congress hoped to bring about a greater match between vocational programs and job opportunities. (See Chapter II and Chapter IV for discussion of related measures, especially NOICC and the SOICCs.)

The Evaluation Requirements

The 1976 Education Amendments introduced new evaluation requirements (Sec. 112) intended further to promote "rational" planning and the responsiveness of the vocational education system to an ever changing labor market. Of these, the most substantial, which originated in the House bill, required States to evaluate all Federally-assisted programs on a regular basis, and to examine directly job placement rates and employers' opinions. In addition, the Commissioner of Education was required to conduct yearly analyses of each State's plan and accountability report, including "suggestions for improvements in the State's programs" (Sec. 112(a)(1)); and the Commissioner (under the House bill) was required to conduct a review of "strengths and weaknesses" of Federally-assisted programs in at least ten States a year. (These are known as MERC/Q--Management Evaluation Review for Compliance/Quality.) Other requirements for evaluation in the Act include those charging the National and State Advisory Councils for Vocational Education with conducting independent evaluations of vocational education programs, services, and activities. This chapter presents a discussion only of the effects of the requirements for State evaluations.

The precise requirements, introduced by the 1976 Education Amendments for State evaluations of vocational education, appear in Sec. 112 (b) (1) and are that:

> (A) each State shall, during the five-year period of the State plan, evaluate the effectiveness of each program within the State being assisted with funds available under this Act; and the results of these evaluations shall be used to revise the State's programs, and shall be made readily available to the State advisory council; and
>
> (B) each State shall evaluate, by using data collected, wherever possible, by statistically valid sampling techniques, each such program within the State which purports to impart entry level job skills according to the extent to which program completers and leavers--
>
> > (i) find employment in occupations related to their training, and
> >
> > (ii) are considered by their employers to be well trained and prepared for employment,
>
> except that in no case can pursuit of additional education or training by program completers or leavers be considered negatively in these evaluations.

The emphasis given in (B) to the employment success of program completers and leavers underscores the continuing Congressional concern, dating back to the original Smith-Hughes Act, that Federally supported vocational education should prepare students for participation in the labor force. According to the House Report, "The Committee has specified these two criteria to judge the effectiveness of these programs because in our opinion they show most clearly whether persons trained in vocational programs are showing the results of such training."5 These criteria are appropriate only for "occupational" students in programs which prepare students for entry level jobs. "Nonoccupational" programs, such as industrial arts, consumer and homemaking education, and prevocational programs, are to be evaluated as well, according to (A) above, but criteria for evaluations of these programs are unspecified.

The evaluation provisions also reflect the general concern of Federal policy with the management and improvement of programs. The Act states that the evaluations are required in order that States may "assist local education agencies and other recipients of funds in operating the best possible programs of vocational education" (Sec. 112 (b) (1)). This concern is underscored by the planning provisions described in Chapter IV. They require each State, in its general application to the Commissioner of Education, to provide an assurance that funds will be distributed among eligible recipients on the basis of annual applications which describe, among other things, how the findings of any program evaluations conducted by the applicant in previous years have been used to develop the program proposed in the application.

Reaction from the Field

State and local vocational educators objected strenuously to the evaluation requirements. Their objections centered on using job placement, which they viewed as unduly narrow, as the major criterion of effectiveness. First, they argued, it does not adequately reflect the nature or goals of vocational education, which is a broad educational program, not just a training program. Second, vocational educators insisted that the criterion of job placement holds schools to an inappropriate standard. School systems should be held accountable for imparting certain knowledge and skills, and for making certain that there is a good fit between what is taught and the jobs available. However, what jobs students actually take is determined by a host of economic and personal factors beyond the school's control. "Hold us accountable for employability, but not employment," is the way many vocational educators phrased the concern.

Beyond these two objections, vocational educators voiced a fear about the possible consequences of evaluating programs only in terms of placement and employers' satisfaction, especially if funding decisions flowed from the results. Easy-to-place students, they suggested, might be accepted for programs at the expense of those harder-to-place, such as minorities, the disadvantaged, or women in nontraditional programs--in short, the very groups Congress most wants to reach.

The Office of Education Interprets the Requirements

The Office of Education interpreted the requirements through regulations issued October 3, 1977, and a policy memorandum issued April 24, 1979. The regulations extend the requirements of the

Act substantially. While the statute refers only to Federally-supported programs, the regulations require that programs to be evaluated include those supported by State and local as well as Federal funds. They also specify four areas in which evaluations must be conducted, one reflecting and three adding to the statutory requirement. On the other hand, the requirement that evaluations be used to revise and improve programs is not developed. The interpretation does not suggest, for example, what information might be used or how it might be used to improve programs. The areas to be evaluated are:

a. planning and operational processes
b. student achievement
c. student employment success
d. the effects of additional services, as measured by the suggested criteria under paragraphs (a), (b), and (c) that the State provides to special populations.

Within each area the regulations also suggest criteria to be used (e.g., wage rates and education or employment as indicators of student employment success), as shown in Table V-1.

Since the regulations include student employment success as just one of four sets of criteria against which programs should be measured. they might seem more acceptable to vocational educators than would be a provision requiring evaluation on the basis of student employment alone. As a practical matter, however, the regulations have been a source of dissatisfaction. State administrators argue that they do not have the resources to implement all of the evaluation requirements, and there is considerable uncertainty regarding acceptable procedures.

TABLE V-1

EVALUATION BY STATE BOARD[6]

These evaluations shall be in terms of:

(a) Planning and operational processes, such as:

(1) Quality and availability of instructional offerings;
(2) Guidance, counseling, and placement and follow-up services;
(3) Capacity and condition of facilities and equipment;
(4) Employer participation in cooperative programs of vocational education;
(5) Teacher/pupil ratios; and
(6) Teacher qualifications.

(b) Results of student achievement as measured, for example, by:

(1) Standard occupational proficiency measures;
(2) Criterion referenced tests; and
(3) Other examinations of students' skills, knowledge, attitudes, and readiness for entering employment successfully.

(c) Results of student employment success as measured, for example, by:

(1) Rates of employment and unemployment;
(2) Wage rates;
(3) Duration of employment; and
(4) Employer satisfaction with performance of vocational education students as compared with performance of persons who have not had vocational education.

(d) The results of additional services, as measured by the suggested criteria under paragraphs (a), (b), and (c) of this section, that the State provides under the Act to these special populations:

(1) Women;
(2) Members of minority groups;
(3) Handicapped persons;
(4) Disadvantaged persons; and
(5) Persons of limited English-speaking ability.

After more than a year and a half of internal struggle and debate over how prescriptive to be, the Office of Education issued a policy memorandum[7] dated April 24, 1979, which defined the term "program" (the entity to be evaluated), gave States permission to sample programs for evaluation, and encouraged a cyclical pattern of evaluation in which approximately one-fifth of the programs are evaluated each year. However, like the regulations, the guidance the memorandum gives is procedural. What information might be useful for revising programs and how it might be used are not discussed.

The new requirements leave the States in sore need of assistance. The procedures are new, complex, and costly to implement. Although the Office of Education has responded to this need in several ways--among them, sponsoring conferences and funding several "how to" projects[8]--States still feel the need for assistance and believe that more assistance would make the job of developing complex new procedures easier.

The States Implement the Requirements

The evaluation requirements stimulated much activity in the States. The NIE has examined the States' response at two points--the Spring of 1978,[9] and the 1979-80 school year.[10] In the Spring of 1978 information was collected for all States from written descriptions of procedures, where they existed, and from personal interviews with State evaluators conducted at a conference on evaluations sponsored by BOAE. In the 1979-80 school year information was collected as part of extensive case studies in 15 States.

Before the 1976 Amendments, program evaluation was done on an informal and unsystematic basis in most States. Few, if any, States had in place evaluation procedures as complex or as comprehensive as described in the regulations. Nevertheless, pieces of the evaluation system envisioned by the regulations were in place. For example, most States reviewed local programs, although often not as part of a formal program evaluation. Student achievement was measured at the local level by teachers, and for some occupations (e.g., practical nursing) by State licensing or certification examinations. In many States, student placement data were collected, again often unsystematically and informally, by teachers. When the 1976 legislation passed, States began to draw together and systematize many of the procedures already in place.

By the Spring of 1978 (when the regulations had been out for approximately six months but the policy memorandum had not yet appeared), work was well underway in most States. Evaluation procedures were being extended, and in some cases developed, in accordance with the regulations, but States were feeling overwhelmed at the prospect of implementing them. Not only were the regulations detailed, costly, and complex, but during the first year no Federal money was appropriated (under Sec. 102(d)) for this purpose. Developmental work was therefore proceeding entirely at State expense.

Of the four categories specified by the regulations--planning and operational processes, student achievement, student employment success, and services to special populations--most effort has gone into systematizing reviews of planning and operational processes and assessment of student placement, an aspect of student employment success. Reviews of planning and operational processes, or "program reviews," as they are usually called, were being conducted in thirteen States and being revised or developed in another thirty-seven States. Assessments of student placement, or student follow-up, as it is usually called, were being done in twenty States and being revised or developed in another twenty-five. Far less attention was being given to the systematic statewide assessment of student achievement because such an assessment requires some development of instruments--an expensive, tricky, and time-consuming process. Almost every State, therefore, decided to continue for the time being with assessment by teachers and to wait and see what other States would do.

By the school year 1979-80, the developmental work on program review procedures and follow-up was completed in most States. Many States were then faced with the task of compressing most of their evaluative activities into the last three years of the five-year cycle of the legislation. The most consistently implemented category in the 15 case-study States was a program review of planning and operational processes, typically involving a "self-evaluation" by the school and an on-site visit by an external team. In only two States of the fifteen were program reviews still being conducted by individual discipline specialists rather than as part of a coordinated, statewide process. This high level of implementation is not surprising since the program review process fits comfortably with the technical assistance role which State education agencies are accustomed to playing with local agencies. The usefulness of reviewing planning and operational processes was well established, and the monitoring of local programs is not new. What the 1976 Amendments have done is cause States to become more systematic in this undertaking and to expand reviews to address some new issues.

Follow-up of students to ascertain job placement is the next most firmly implemented evaluation activity. Here again the procedure is one whose utility was generally established and which was often in place, at least informally, prior to Federal legislation. The legislation provided the stimulus for systematizing the activity at a statewide level, and the evaluation provisions are reinforced by the inclusion of these figures among the data required for the Vocational Education Data System (VEDS). By the school year 1979-80, 12 of the 15 case-study States had in place a statewide system of reporting; in the remaining three States, such a system was still under development. While the actual collection of data is generally a local responsibility, State agencies often facilitate the process by providing forms and, in many cases, the names of the students to be followed up.

Most States follow-up both completers and leavers, as required by the Act. However, there are serious practical difficulties in gathering accurate and reliable data which are consistent across districts, compounded by administrators' lack of conviction that such standardized follow-up data are necessary or appropriate and by the lack of Federal funding to ease the burden which requirements place on State and local resources.

Formal follow-up data on employers' satisfaction are collected much less consistently than data on student placement. Approximately half the case-study States do not have a statewide employer follow-up procedure at both the secondary and postsecondary level. Vocational educators are less inclined to see employer follow-up as an important and necessary indicator of vocational program effectiveness than they are student follow-up; nor are the data required for VEDS. At least one of the case-study States does not plan to survey employers because it has data which show that employers' opinions are highly correlated with students' reports of employment success. Given this strong relationship, the State argues, separate measures of employers' satisfaction are duplicative. In those States which do collect employer follow-up data, poor response rates are an even bigger problem than for student follow-up data.

Student achievement is generally regarded as an important index of program effectiveness. Nonetheless, it is generally believed that collecting this information is best carried out locally by individual teachers, rather than uniformly on a statewide basis. None of the 15 States required statewide reporting of student achievement data, and State responsibility was seen as the monitoring of local activity. However, in response to the 1976 legislation, most States have tried to systematize the assessment of student achievement to some extent. For example, some States, both individually and in organized consortia, are working to develop occupational proficiency standards and criterion referenced curricula for vocational programs. The process is far from completed--being complex, time-consuming, and rife with technical difficulties. Some States are opposed to the uniformity and regulation in curricula that statewide achievement testing or proficiency criteria would impose.

Less attention has been given to the fourth requirement laid down by the regulations, evaluating the results of additional services to special populations. The program review process typically examines the attention given to special populations, but focuses on access to, not the results of, vocational programs and services. Some States ask questions, for example, about whether supplemental services are provided to handicapped and disadvantaged students and whether instructional materials are nondiscriminatory in terms of sex, race, or ethnic origin. A few States have the State staff member who is responsible for special populations and sex equity participate in the program review teams. Other States argue that the additional services to special populations are automatically included in the regular evaluation procedures so no special attention is needed.

Overall, however, States are engaging in a considerable amount of evaluative activity. There is great variation in its scope and depth, but the States are demonstrating a strong commitment to and investment in this requirement of evaluation.

The Use of Evaluation Results

When States were directly asked in the spring of 1978 why most evaluations were being done, 32 cited program improvement as a reason, although nine States said that the main reason they were doing evaluations was simply to comply with a regulation. However, in the 15 States studied during the 1979-80 school year, the ways in which evaluation results are used vary among the four evaluation categories, much as implementation does.

The content of program reviews parallels, in most cases, the type of information an accrediting team would be interested in. Examples of topics regularly covered are quality of facilities, equipment, and curriculum, whether instructors are certified, and whether guidance and counseling services are available. Some States inquire into topics that are major Federal concerns, such as access of women and other special populations to programs, whether labor market data or student placement data inform local planning, and the like. Results of program reviews are used to revise and improve programs in most States. In fact, most of the improvement comes about in response to program reviews.

Each district or institution is informed of the deficiencies or weaknesses found by the review team in its educational planning and operational process. The program review is thus an important transaction between the State and local school districts and one which affords the States an opportunity to see that LEAs are attentive to the topics the State believes are important. If the State embraces Federal priorities these will be conveyed to locals during the program review.

All States offer technical assistance to local agencies in improving programs. Beyond that, however, States vary considerably in the means by which they oversee the changes dictated by the review and in the sanctions which they impose if corrective action is not taken. In some States, the implementation of changes is informal and left to the discretion of the school district. Other States have more formal procedures involving requirements for corrective action, plans, and later visits from State staff to monitor the implementation of the changes. The ultimate sanction for failure to take corrective action is the threat of withholding program approval on Federal funding. However, most States are extremely reluctant to use this. They prefer to continue working with the district in a supportive way and to encourage program improvement.

The use of student follow-up data varies more widely than the use of program review data. At a minimum, the data are aggregated as required for VEDS. Most States also distribute student placement results to individual school districts, though they do not necessarily provide guidelines or requirements for local use of that information. Five of the 15 States, however, make use of student placement data in the program review process and in planning; one State, for example, uses student placement data for individual schools to create a product index, which is also constructed from enrollment and placement figures, and uses it in conjunction with process data in the program review process. Another State uses its State information system to produce for each program in each district a printout of student placement data from the previous year together with enrollment and labor market projections to be used in local planning. Only one State uses student placement data to make funding decisions, and even that State will probably take this factor out of its funding formula since BOAE policy prohibits the use of program quality variables in distributing funds.

Since data on student achievement, the results of services to special populations and, in many cases, employers' satisfaction are not collected through a statewide system, they are obviously not used by the State agency for program improvement or other purposes. (This is not to say that these data are not collected and used at the local level; this study, however, does not have adequate information to address that issue.)

Summary

The 1976 Amendments to the Vocational Education Act introduced major new requirements for State evaluation of Federally-funded vocational education programs. These requirements were intended to promote rational planning and responsiveness of the vocational education system to an ever changing labor market. Evaluation requirements (Sec. 112(b)) specify that vocational education programs be evaluated every five years and that those programs purporting to impart entry level skills be evaluated in terms of student placement in jobs related to their training and employers' satisfaction with them. This information is to be used to manage and improve programs. The hope is that evaluation results will be used in such a way as to insure more congruence between vocational education programs and available jobs.

The regulations extended the measures against which programs are to be evaluated to include student achievement and a review of program operation and to require evaluation of additional services offered to special needs populations. The evaluation requirements thus specified are regarded by most vocational educators as reasonable and appropriate in a theoretical sense, but difficult as a practical matter because they are expensive and complex to develop and implement. At the time the 1976 Amendments were enacted, few, if any, States had in place evaluation procedures as complex or comprehensive as envisioned by the regulations. Nevertheless, pieces of the evaluation system described by the regulations were in place; e.g., most States reviewed local programs, although not as part of a formal evaluation.

Most States needed the first two years for development of procedures, compressing the program evaluation into the last three years of the cycle. By school year 1979-80, much activity had taken place and strong commitment to evaluation was evidenced. Program reviews are the activity most firmly implemented. Assessments of student placement in occupations related to training are carried out by teachers in most States in accordance with procedures developed by the State. Student placement data are entered into the Vocational Education Data System and aggregated at the State and Federal levels. Student achievement continues to be assessed locally, with some monitoring of this activity by the State.

Evaluations are used to revise and improve programs in most States, but not exactly in the way envisioned by Congress. First, more attention is devoted to evaluating program quality than effectiveness (or to examining educational inputs and processes rather than outcomes) largely because State agency staff, at least in the 15 case-study States, see the program review process as the most important component of evaluation. This judgment, in turn, probably derives from the fact that it is seen as the most useful type of evaluation by both States and local staff, and, also, from the State agency perspective, has had the biggest impact on local programs. Second, evaluation results are being used to make decisions about programs. Most of the program improvement and revision comes about in response to the findings of program reviews. Student placement rates are used to make programmatic decisions, but they are not the sole factor on which decisions are based. Instead, they are taken into consideration along with a number of others, such as student interest and enrollment in a course. Moreover, evaluation results are typically used to revise and improve programs. Only rarely are they used to terminate programs or inform funding decisions.

FOOTNOTES

1. U.S. Congress, House, Committee on Education and Labor, The Vocational Education and National Institute of Education Admendments of 1976: Report to Accompany H.R. 12835, House Report No. 94-1085, 94th Cong., 2d Sess., 1976, p. 20.

2. Ibid., p. 20.

3. U.S. General Accounting Office, cited in House Report, op. cit., pp. 20-21.

4. Drewes and Katz, cited in House Report, op. cit., p. 21.

5. House Report, op. cit., p. 38.

6. Federal Register, vol. 42, no. 191, October 3, 1977, Sec. 104.402.

7. "Policy Memorandum." BOAE DSVPO - FY 79-2.

8. Examples of such projects are the Manuals and Handbooks developed by the National Center for Research in Vocational Education under their contract with BOAE. There have been thirteen such Handbooks, among them:

   Evaluation Handbook Volume I: Guidelines and Practices for Follow-up of Former Vocational Students;

   Evaluation Handbook Volume II: Guidelines and Practices for Follow-up Studies of Special Populations;

   Vocational Education Outcomes: Perspective for Education;

   Guidelines and Practices for Measuring Employer Satisfaction with Former Vocational Students' Training.

9. Work performed under contract by CRC Education and Human Development, Inc.

10. Information was obtained from the case studies in 15 States conducted by Abt Associates, Inc.

CHAPTER VI. THE VOCATIONAL EDUCATION ENTERPRISE

Introduction

The public school vocational education enterprise of the United States is shaped by policies made at each of the three levels of government--local, State, and Federal. It is neither governed nor organized centrally. The States and localities are responsible for the governance, as well as for the operation, of educational programs and the provision of related services. It is a collection of different State systems--not a single system. Consequently, its diversity may convey a sense of bewildering complexity.

Yet, the enterprise is national in scale and reflects pervasive national purposes which, in turn, give rise to commonalities. Moreover, the enterprise is given cohesiveness by uniformities in the knowledge and skills content of the occupational curricula it offers and the related services it provides.

The terms "vocational education" and "vocational education and training" are used in a variety of senses. From the perspective of existing Federal legislation, "vocational education" formally means organized programs of instruction less than the first baccalaureate degree level, offered in secondary and postsecondary institutions to youths and adults, designed to impart knowledge and skills related to participating in paid employment or in other socially productive activities. These programs of instruction, numbering more than 400, are offered in some 16,000 schools. They are conventionally classified under eight major fields or areas--agriculture, distributive, health, occupational home economics, business and office, technical, trade and industry, and vocational consumer and homemaking education. All except the last are occupational programs. (These major fields are designated by two-digit instructional codes.)

The sections that follow describe selected aspects of the public school vocational education enterprise. They also show why it is difficult to represent it with completeness, clarity, and accuracy. Some of the difficulty arises from the absence of requirements to report on all its features to the Federal government and some from information bases that are partial, of uncertain reliability, or incompatible. Another source of difficulty lies in the fact that the new Vocational Education Data System (VEDS), which the Education Amendments of 1976 sought to have established, is not yet (as of September 1980) fully operational. In addition, information and analyses, emerging from extramural research efforts supported by the NIE for the Vocational Education Study, that were designed to help represent the enterprise more fully will not be available until late in 1980 and early in 1981.

Enrollments and Students: National Data

How many public school vocational education students are there in the United States? To ask anyone who has grappled with this question to answer it is to invite a technical discourse or a debate. First, there are several sources from which national student enrollment data may be derived. Second, there are different ways of identifying and, therefore, of counting vocational education students. If the students enrolled in all courses and programs of study classified as vocational are counted, the resulting number is much larger than that resulting from counting only students enrolled in occupational programs of study, each consisting of an organized sequence of courses. If students enrolled in prevocational courses, such as industrial arts, or in nonoccupational home economics--that is, vocational consumer and homemaking programs--are counted, the result is still another number for the national enrollment in vocational education.

This can be seen by examining the data on vocational education enrollments in secondary schools for school program year 1978 (July 1, 1977-June 30, 1978) reported to and published by the U.S. Office of Education's Bureau of Occupational and Adult Educationl (replaced by the Department of Education's Office of Vocational and Adult Education), presented in Table VI-1. Total unduplicated enrollments in federally-funded courses and programs were reported to be more than 10.2 million, or about 70 percent of all public high school students in grades 9 through 12. Part of this total number, almost 2.8 million, was in nonoccupational consumer and homemaking education programs and almost 1.5 million were in prevocational industrial arts programs. The number reported enrolled in the seven broad occupational fields is less than five million. Of these, some fraction is accounted for by students taking vocational education courses as electives but not pursuing organized occupational programs of study. Thus, defining a vocational education program in terms of a minimum number of occupational course offerings and contact hours substantially reduces the number of students counted as enrolled in vocational education.

According to the first VEDS returns, there were more than 10 million enrollments in all secondary vocational education courses and programs in program year 1979. However, the students enrolled in occupational programs of study came to only about three million. An Office for Civil Rights (OCR) special survey of institutions offering vocational education programs in 1979 shows, by contrast, some 2.7 million enrollments in secondary occupational programs.[2]

TABLE VI-1

VOCATIONAL EDUCATION NATIONAL ENROLLMENTS, 1978, 1979[1]

(IN MILLIONS)

Level	Enrollments		
	1978 BOAE Data	1979 VEDS	1979 OCR
Total Enrollment	16.7	17.3	8.3
Total Occupational Enrollment	10.4[2]	7.7[2]	5.0
Secondary			
Occupational	4.9	3.1	2.7
C&HE	2.8	2.7	1.0
Industrial Arts	1.5	1.7	0.6
Other Nonoccupational	1.0	2.9[3]	1.4
Total	10.2	10.4	5.7
Postsecondary			
Occupational	2.0	1.9	1.8
Nonoccupational	0.1	0.2	0.4
Total	2.1	2.1	2.2
Adult			
Long-term Occupational	--	0.9	0.4
Short-term Occupational	--	2.0	--
Total Adult Occupational	3.5	2.9	--
Long-term Nonoccupational	--	0.1	--
Short-term Nonoccupational	--	1.8	--
Total Adult Nonoccupational	0.9	1.9	--
Total Adult Enrollment	4.4	4.8	--

Sources: Bureau of Occupational and Adult Education, The Vocational Education Data System, and the Office for Civil Rights Survey of Institutions

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1. BOAE and VEDS data include only enrollments in federally-funded programs; OCR data includes only enrollments in institutions with five or more programs plus other institutions covered in the 1976 OCR survey offering fewer than five programs.

2. Includes short-term adult enrollments.

3. Includes all high school enrollment below grade 11.

These estimates of secondary enrollments rest upon counts made by school administrators, and it is known that students sometimes differ from administrators in their perceptions of the programs in which they are enrolled. Substantial numbers of high school students who do not think of themselves as pursuing a vocational program of study and are not so classified by their schools take vocational courses as electives. Excluding such students from the count of occupational enrollments in the 1978 Bureau of Occupational and Adult Education (BOAE) data reported above (about five million) means that an estimated three million high school students could be counted as enrolled in occupational programs of study.

A report on the educational and labor market experiences of a cohort of youth, ages 14-21, surveyed on January 1, 1979,[3] provides information from high school students who participated in vocational education programs in grades 9 through 12. Of this set of individuals in the sample, about 14 percent said that they were enrolled in such programs. On the basis of this percentage, the number of high school students enrolled in vocational education programs of study, and not merely in courses, would come to about two million.

Embedded in the problem of estimating national secondary enrollments in occupational programs is the question of what constitutes a "program." There are no uniform rules for establishing how many courses, class meetings, or class hours per week constitute a program.

A 1972 study of a national sample of high school students shows that almost 90 percent of those in vocational courses were taking only one course, or not more than five class meetings per week. More than 70 percent of the classes, moreover, were less than one hour in length.[4] Another analysis of the same data base indicates the extent to which high school students in vocational classes were not in occupational programs. This was the case, for example, with almost three-fifths of the vocational agriculture enrollees and almost two-fifths of the distributive education and trade and industrial education enrollees.[5] A recent Minnesota study provides information on the time spent in vocational education courses as a percentage of the total time spent in class hours in grades 10-12. It reports that 25 percent of all vocational education students spend less than three percent of their high school class hours in vocational education courses; 50 percent, less than six percent of their class hours in such courses; and 78 percent, less than 12 percent of their class hours in such courses.[6] These findings also underline the extent to which enrollees may not be occupational program students.

Determining how many students are enrolled in postsecondary and adult vocational education courses and programs is attended by difficulties similar to those already noted. For program year 1978, BOAE reported almost 2.1 million postsecondary enrollments, of which about two million were occupational, and almost 4.4 million adult enrollments, of which almost 3.5 million were occupational. There is a problem with the adult enrollments because a substantial proportion of them are in what is called short-term adult programs, and these include nonoccupational courses and "quick start" industrial training programs. According to the definition of short-term adult enrollment adopted by VEDS, students enrolled in programs of less than 500 contact hours are counted as short-term adults. In the VEDS report on program year 1979, short-term adult students numbered two million, representing 70 percent of all adult occupational enrollments.

A somewhat different picture of nonsecondary student enrollments is afforded by the 1979 Office for Civil Rights survey of institutions. The OCR number of postsecondary occupational enrollments corresponds to the number reported by VEDS but is smaller than that reported by BOAE. OCR adult long-term occupational enrollments, however, are only half the number reported by the VEDS.

There are three statistical pictures of the public vocational education enterprise in terms of total students and kinds of students in Table VI-1. They illustrate the extent to which differences in methods of collecting data, in key terms, and in the universes sampled or covered result in significantly different measures. The absolute numbers in the table should be used with appreciation of the fact that the data have not been audited, but this should not detract from the value of the data in indicating the relative weight of occupational program enrollments among the total number of students involved in the public vocational education enterprise. It is important that occupational program enrollments at the secondary level account for less than half of all vocational education enrollees. At the postsecondary level, however, they are very probably in excess of four-fifths--a substantially greater proportion.

National and State Enrollment Patterns

The enrollment characteristics of the public vocational education enterprise could better be understood if their development over time could be delineated with confidence, not only nationally but also on a State-by-State basis. Reliable historical statistics would also permit the construction of baseline data from which changes could be traced in enrollment and expenditure patterns since the adoption of the Education Amendments of 1976. For these as well as other reasons, the NIE contract with the University of California called for an examination and evaluation of three existing national data bases. Two of these could be examined for the years 1971-1976. One consists of the data submitted by the States to and reported by BOAE, and the second, of data reported by the Congressionally-initiated Project Baseline.[7] The third came into existence as a result of Section 437 in the General Education Provisions Act of 1974, which required the collection of information on the flow of funds to LEAs of formula-funded Federal education programs.

Analysis of the three national data systems reveals that all show annual changes in State level data that do not appear reasonable. The State-reported data are too unstable over time to serve baseline purposes, even though reasons for the instabilities can be found. For example, between 1975 and 1976 changes of more than 20 percent occurred in Project Baseline secondary enrollment data in seven States. Changes in excess of 20 percent were reported in postsecondary enrollments in 16 States; in adult enrollments in 13 States; in handicapped enrollments in 26 States; and in disadvantaged enrollments in 20 States. Moreover, comparisons between any two of the three systems reveal significant inconsistencies in the data elements reported.[8]

The differences among States in the patterns of enrollment reported are striking, as an examination of the information, presented in Table VI-2, available for ten States shows. For the nation as a whole, it appears that more than half of all 11th and 12th grade vocational education enrollments in program year 1979 were in a sequence of courses leading toward employment in a particular occupation. Among the ten States, however, 11th and 12th grade occupational enrollments ranged from a low of 43 percent of all vocational education enrollments in these grades in Iowa to a high of 76 percent in Vermont and Alabama, according to VEDS information. Long-term adult enrollment, which accounts for 11 percent of all occupational enrollments nationally, ran from a low of two percent in Vermont to a high of 38 percent in Iowa.

Enrollment data may reflect State policy in the use of Federal funds, since enrollments only in federally-funded programs have to be reported. South Carolina, for instance, reported no short-term adults in occupational programs, even though the State has a strong industrial training program operating in public vocational education institutions, because it is not funded with Federal money. The ratio of short-term adults to those in long-term occupational training programs may also be determined by State policies. High ratios occur in States which give emphasis to industrial training programs. North Carolina and Idaho, for example, report high ratios of short-term adult enrollees to long-term adult enrollees, in comparison with those reported by New York and Illinois. Such differences could be an artifact of reporting procedures and definitions, but they are much more likely to reflect differences among States in their policies for vocational education. There are also variations among States in the proportions of total 11th and 12th grade high school enrollments reported to be in occupational programs. As Table VI-2 shows, while Illinois and New York each reported 60 percent enrolled in occupational programs, Iowa and Texas reported 27 percent and 32 percent, respectively.

The distribution of vocational education enrollments by occupational field varies, as would be expected, from State to State. Table VI-3 shows the range of differences in ten States in the shares of total secondary enrollments accounted for by each of the seven major occupational fields. Thus, for agricultural occupations, the spread from lowest to highest share is from about two percent in New York to more than 37 percent in Iowa. For office occupations, the range is from a low of almost 11 percent in Iowa to a high of 49 percent in Idaho and from 15 percent in Idaho to almost 44 percent in North Carolina for trade and

TABLE VI-2

ENROLLMENTS IN PUBLIC VOCATIONAL EDUCATION INSTITUTIONS IN TEN STATES, 1979

(IN THOUSANDS)

	AL	CA	FL	ID	IL	IA	NY	NC	TX	VT
Total Enrollment	221	1930	1152	44	802	328	1522	632	1074	30
Total Occupational Enrollment	102	1090	249	14	352	58	562	167	339	9
11th and 12th Grade Enrollments	58	373	123	10	217	27	330	70	136	9
Postsecondary Enrollments	15	519	62	4	105	9	147	67	154	0
Long-Term Adult Enrollment	28	198	64	--[1]	31	22	86	30	50	--[1]
Nonoccupational Enrollment	104	647	606	19	380	65	663	212	439	9
Short-Term Adult Enrollment	15	193	297	11	70	205	297	253	296	12
Percent of All 11th & 12th Grades in Occup. Programs	50	53	50	30	60	27	60	39	32	57
Ratio, Occupational to Nonoccupational Enrollment	1.0	3.5	0.4	0.7	0.9	0.9	0.8	0.8	0.8	0.1

Source: The Vocational Education Data System information, collected in 1979

[1] Less than 500.

TABLE VI-3

SECONDARY VOCATIONAL EDUCATION:
DISTRIBUTION OF ENROLLMENTS BY OCCUPATIONAL FIELDS IN TEN STATES

	AL	CA	FL	ID	IL	IA	NY	NC	TX	VT
Percent Enrollment										
Agriculture	15.7	8.1	7.7	19.4	5.6	37.3	2.4	13.3	18.8	11.3
Distribution	9.7	6.0	11.4	12.8	8.5	14.8	5.0	14.0	15.8	2.7
Health	4.2	2.4	1.9	1.6	2.1	3.7	2.8	7.0	2.9	4.1
Occupational Home Economics	5.8	4.1	6.3	1.4	11.6	5.9	1.9	6.7	11.1	5.7
Office	23.8	49.0	39.0	47.8	40.5	10.7	63.8	14.2	14.9	29.8
Technical	0.0	0.1	0.1	0.2	0.0	0.0	1.9	0.0	0.1	0.0
Trade and Industrial	34.2	29.4	19.3	15.0	30.4	27.7	22.0	43.8	36.4	41.0
Other	6.5	0.9	14.3	1.8	1.3	0.0	0.0	1.0	0.0	5.5
Total Enrollments (in Thousands)										
	58	373	123	10	217	27	330	70	136	9

Numbers may not total 100 percent because of rounding.

Source: The Vocational Education Data System information, collected in 1979

industrial occupations. In each of the States except Iowa, more than half of the secondary enrollments were concentrated in two fields--trade and industrial and office occupations.

Similar differences among States appear in the distribution of occupational enrollments at the postsecondary level shown in Table VI-4. Tables VI-3 and VI-4 also indicate the extent to which enrollments may be concentrated differently in a State depending upon the educational level. Thus, in North Carolina the enrollment in technical occupations occurred at the postsecondary and not the secondary level, and in the other nine States the shares of enrollments in technical occupations at the secondary level were small. Similarly, enrollments in health occupations were relatively much heavier in postsecondary than secondary institutions. Variations among the ten States for long-term adult enrollments are reported in Table VI-5, which shows that in such southern States as Florida, Alabama, and North Carolina these are heavily concentrated in trade and industrial occupations.

Programs and Institutions

Most vocational education students--about 7 out of 10--are enrolled in courses and programs of study at secondary institutions, according to the recent Office for Civil Rights survey. Of the 8.3 million enrollments reported, about 3 out of 5 were in comprehensive high schools and about 1 out of 10 were in secondary area vocational centers. At the postsecondary level, less than 3 out of 10 enrollments were in the community and junior colleges and 1 out of 50 were in vocational area centers or technical institutes. As Table VI-6 shows, enrollments in occupational

TABLE VI-4

POSTSECONDARY VOCATIONAL EDUCATION: DISTRIBUTION OF ENROLLMENTS BY OCCUPATIONAL FIELDS IN TEN STATES

Percent Enrollment

	AL	CA	FL	ID	IL	IA	NY	NC	TX	VT[1]
Agriculture	1.5	3.2	1.7	7.3	3.1	13.2	2.8	3.8	0.9	0
Distributive	4.1	15.2	12.6	5.4	10.0	16.1	10.7	4.8	16.9	0
Health	17.0	6.7	16.5	8.2	16.8	27.8	15.1	9.1	10.3	0
Occupational Home Economics	1.0	4.8	2.3	1.9	4.4	1.0	3.3	3.8	2.3	0
Office	29.3	33.2	31.3	17.7	32.3	15.4	37.6	49.2	29.2	0
Technical	8.4	12.2	18.6	6.8	12.6	16.9	15.8	24.6	11.0	0
Trade and Industry	38.7	24.0	16.9	51.6	20.7	9.4	14.6	4.6	27.4	0
Other	0.0	0.7	0.1	1.1	0.1	0	0	0	2.1	0

Total Enrollments

(in Thousands)

	AL	CA	FL	ID	IL	IA	NY	NC	TX	VT[1]
	15	519	62	4	105	9	147	67	154	0

Numbers may not total 100 percent because of rounding.

Source: The Vocational Education Data System information, collected in 1979

[1] No postsecondary enrollments were reported.

TABLE VI-5

LONG-TERM ADULT VOCATIONAL EDUCATION: DISTRIBUTION OF ENROLLMENTS BY OCCUPATIONAL FIELDS IN TEN STATES

Percent Enrollment

	AL	CA	FL	ID	IL	IA	NY	NC	TX	VT
Agriculture	0.6	2.1	2.1	0.0	1.0	10.0	1.4	0.8	1.0	0.0
Distributive	0.7	12.6	1.2	0.0	9.5	8.8	2.6	1.2	19.7	0.0
Health	9.9	7.6	6.6	45.9	10.3	22.3	6.1	14.6	15.6	100.0
Occupational Home Economics	0.5	4.5	2.4	0.0	5.2	2.0	0.8	4.9	3.6	0.0
Office	15.4	29.1	8.3	17.0	24.2	22.5	40.2	1.3	29.8	0.0
Technical	0.5	6.5	3.7	0.0	6.5	0.3	5.5	0.0	3.0	0.0
Trade and Industrial	72.4	37.2	75.6	36.7	36.9	33.1	43.4	77.2	22.0	0.0
Other	0.0	0.4	0.1	0.4	6.4	0.0	0.0	0.0	5.3	0.0

Total Enrollments

(in Thousands)

	AL	CA	FL	ID	IL	IA	NY	NC	TX	VT
	28	198	64	n.a.	31	22	86	30	50	--

Source: The Vocational Education Data System information, collected in 1979

TABLE VI-6

TYPES OF ENROLLMENTS BY KINDS OF INSTITUTIONS, 1979

(in Thousands)

	Junior & Community College		Comprehensive High School		AVC[1] Secondary		AVC[1] Postsecondary	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Occupational	1750	76.8	2274	44.3	479	63.4	97	57.7
Consumer & Homemaking	62	2.7	954	18.6	22	2.9	5	3.0
Industrial Arts	2	0.1	568	11.1	11	1.5	--	--
Nonoccupational	267	11.7	1268	24.7	115	15.2	30	17.9
Long-Term Adult	199	8.7	70	1.3	128	17.0	36	21.4
Total	2280	100.0	5134	100.0	755	100.0	168	100.0

Source: Office for Civil Rights Survey of Institutions, conducted in 1979

1. Area Vocational Centers.

programs of study account for well under half of all vocational education enrollments in the comprehensive high schools, but for substantially greater proportions of such enrollments in the secondary specialized vocational schools and in postsecondary institutions.

According to the OCR Survey data, programs in trade and industrial and in office occupations combined accounted for more than half of all enrollments at both the secondary and postsecondary levels. This is shown in Table VI-7. It also indicates that enrollments in office occupations ran much lower in institutions at both levels specializing in vocational education than in others. The vocationally specialized institutions showed relatively high enrollment rates in trade and industrial occupational programs. Enrollments in agricultural programs were relatively heavier at the high school than the postsecondary level, but the reverse was true for programs in the health occupations. Of the adults enrolled in employment-related, short-term courses of study, trade and industrial occupations accounted for the largest fraction, or more than two-fifths, according to the VEDS returns, as Table VI-8 indicates. Among students courses were not employment-related, an even larger proportion of short-term adult enrollments, almost half, were in vocational home economics.

Under each of the seven major occupational fields (identified by two-digit instructional codes), there are many specialized occupational programs (identified by six-digit instructional codes). Their numbers have multiplied and their contents have been modified as a result of changes in the economy, technology, job requirements, licensing practices, collective bargaining agreements, and still other factors. At one time, vocational

TABLE VI-7

PERCENTAGES OF NATIONAL ENROLLMENTS IN OCCUPATIONAL PROGRAMS BY KINDS OF INSTITUTIONS, 1979

	Junior & Community College	Comprehensive High School	Secondary AVC1	Postsecondary AVC1
	Percent	Percent	Percent	Percent
Agriculture	2.7	9.6	5.7	3.3
Distribution	12.1	7.9	6.0	7.9
Health	11.8	2.3	6.4	12.1
Occupational Home Economics	3.7	13.7	6.5	1.2
Office	34.3	39.0	12.9	22.6
Technical	14.9	0.7	2.0	8.5
Trade and Industrial	20.5	26.8	60.5	44.4

Source: The Office for Civil Rights Survey of Institutions, conducted in 1979

1. Area Vocational Center.

TABLE VI-8

PERCENTAGES OF SHORT-TERM, EMPLOYMENT-RELATED ADULT ENROLLMENTS BY OCCUPATIONAL FIELD, 1979

	Percent
Agriculture	5.4
Distribution	10.7
Health	10.6
Occupational Home Economics	4.3
Office	19.5
Technical	3.9
Trade and Industrial	43.2
Other	2.4

Source: The Vocational Education Data System information, collected in 1979

agriculture was a program of instruction in farming. Today, the instructional programs in that field include agricultural production, agricultural supplies and services, farm and ranch management, farm business analysis, agriculture products, salt and water mechanics, ornamental horticulture, agricultural resources, forestry, equine studies, and other equally specialized occupations. Similarly, 25 major instructional specialities are now listed among the health occupations and almost the same number among technical occupations.

The numbers of broad occupational fields and the specialized instructional programs available in a district or an institution are rough indicators of educational opportunity and choice. Five occupational programs are now regarded as the minimum number for an institution to be considered an area vocational center. A smaller number of programs may be a sign of limited choices for students. As with other dimensions of the vocational education enterprise, districts and institutions differ in the number and variety of occupational programs they offer. In some cases, the range of offerings is restricted because a school specializes in a single occupational area, such as automotive, aviation, or printing occupations. In others, the number of programs may be limited by budgetary constraints, class size requirements, labor market features, and still other factors.

There are many rural areas in which students interested in enrolling do not have access to a school with five or more programs, to a well-equipped area vocational center, or to state-certified vocational programs. In 1978, 160 of Nebraska's 210 high schools did not offer five or more programs. In 1979, more than one-third of the secondary LEAs in Iowa offered no more than two programs, even though five are required by State law.[9] On the other hand, most postsecondary students in Iowa do have access to one of the State's 15 area vocational centers.

Even where there are varied offerings, student enrollments may be concentrated in a few programs. Kansas provides an illustration. In 1979-80, 11 different six-digit instructional programs were offered in the State under vocational agriculture programs. These accounted for a statewide total of 217 courses offered in secondary and postsecondary institutions. But almost 4 out of 5 (or 171 out of 217) were courses in agricultural production. Similarly, 23 different health occupations were represented by 96 course offerings, but more than 2 out of 5 of these (or 41 out of 56) were in either practical nursing or nursing assistant courses.[10] In the same year, half of the high schools in Texas offered only vocational agriculture and/or consumer and homemaking education. In Michigan, even though students were enrolled in many different technical education programs, 43 percent were concentrated in electronics technology.

By contrast, there are States, regions, and institutions in which the program offerings are rich in variety, of high quality, and accessible. One postsecondary technical institution in an affluent county of a metropolitan area, for example, currently offers 45 different two-year occupational programs, nine apprenticeship programs, and a variety of other courses. Another institution, this one a postsecondary area vocational technical center, in a rural area in a low per capita income State is able to offer 19 different occupational programs of study.

Enrollments and Student Characteristics

Federal vocational education and other policies seek to achieve equality of opportunity for all students for vocational education. In practice this means overcoming, if not eliminating, the obstacles to attaining that goal associated with certain attributes of individuals--namely, their economic and academic disadvantages, their sex, their membership in a racial or ethnic group, their physical or other handicaps, and their lack of proficiency in the English language. The public vocational education enterprise can not be characterized adequately from the perspective of these several equity considerations. Enrollment data by specific occupational programs for disadvantaged students, for example, are not yet available. However, analysis of VEDS preliminary returns and OCR survey data by the Vocational Education Study staff provides information on the distribution of enrollments within occupational fields by sex and by minority group membership. Three occupational areas were chosen for analysis: vocational agriculture, predominantly a high school program and traditionally male dominated; distributive education, in which secondary and postsecondary programs are offered and males and females traditionally enroll; and technical education, in which male enrollments predominate and the students are postsecondary and adult.

Table VI-9 reports on the distribution of enrollments by sex, race, and ethnicity among occupational programs in these three fields. It shows that in 1979 more than three-fourths of the students in vocational agriculture programs, with the exception of ornamental horticulture, were male. Non-white participation was low in all program categories, but especially so in agricultural production, which has the largest number of enrollments. Nationally aggregated statistics, however, obscure the fact that States with heavy enrollments in vocational agriculture may also have small non-white populations, as do Iowa and North Dakota, for example.

TABLE VI-9

PERCENT DISTRIBUTION OF VOCATIONAL EDUCATION ENROLLMENTS BY SEX, RACE, AND ETHNICITY FOR SELECTED OCCUPATIONAL PROGRAMS IN 1979

	Occupational Area	Male	Female	White	Black	Hispanic	Other
Vocational Agriculture	100.0						
Agricultural Production	45.2	86.1	13.9	90.7	4.4	3.3	1.6
Agricultural Supplies/Services	5.0	80.0	20.0	93.1	3.2	2.7	1.0
Agricultural Mechanics	17.8	94.9	5.1	87.2	10.1	1.9	0.8
Agricultural Products	1.4	81.5	18.5	85.3	10.8	2.2	- -
Ornamental Horticulture	18.6	54.9	45.1	86.3	8.8	2.3	2.6
Agricultural Resources	4.0	77.7	22.3	93.4	4.7	0.8	1.1
Other Agriculture	3.0	86.6	13.4	91.0	6.3	1.1	1.6
Technical Education	100.0						
Architectural Technology	7.3	79.4	20.6	75.9	10.9	8.6	4.6
Automotive Technology	2.6	93.0	7.0	87.2	8.4	1.2	3.2
Civil Technology	4.5	90.2	9.8	84.2	8.1	4.9	2.8
Electrical Technology	4.4	94.4	5.6	84.0	9.5	4.3	2.2
Electronic Technology	22.9	91.0	9.0	80.8	9.7	5.3	4.2
Environmental Control Technology	1.7	93.0	7.0	85.2	6.4	5.1	3.3
Industrial Technology	3.4	87.8	•12.2	84.9	12.2	1.8	1.1
Mechanical Technology	6.9	89.9	10.1	85.5	9.6	2.7	2.2
Scientific Data Processing	4.4	44.1	55.9	77.9	3.6	15.5	3.1
Commercial Pilot Training	2.4	81.4	18.6	92.8	3.8	1.8	1.6
Fire and Fire Safety Technology	3.2	95.8	4.2	90.1	7.2	1.5	1.2
Police Science Technology	16.9	74.8	25.2	78.0	17.8	1.7	1.5
Water and Waste Technology	0.9	82.6	17.4	85.5	6.3	3.8	4.4
Other Technical Education	18.5	63.6	26.4	80.8	14.0	4.0	1.2
Distributive Education	100.0						
Advertising Services	1.7	51.8	48.2	82.3	14.3	2.3	1.1
Apparel and Accessories	4.6	16.0	84.0	79.1	16.1	4.0	0.8
Automotive	1.2	85.6	14.4	86.9	9.9	2.7	0.5
Finance and Credit	4.6	27.5	72.5	88.3	6.1	3.9	1.7
Floristry	0.5	26.9	73.1	89.5	7.8	2.3	0.4
Food Distribution	4.6	59.5	40.5	82.2	11.2	5.4	1.2
Food Services	5.3	43.8	56.2	76.7	17.7	3.3	2.3
General Merchandise	35.5	56.1	43.9	77.5	14.7	5.5	2.3
Hardware, Building Materials, Etc.	0.6	78.3	21.7	90.0	6.1	3.6	0.3
Home Furnishings	0.4	40.3	59.7	90.8	6.4	2.1	0.8
Hotel and Lodging	2.1	59.5	40.5	72.8	15.6	4.2	7.4
Industrial Marketing	3.2	63.0	37.0	76.6	12.6	9.7	1.2
Insurance	1.2	51.8	48.2	75.3	23.3	1.1	0.4
Personal Services	1.0	38.3	61.7	80.8	14.0	4.2	1.0
Real Estate	18.0	50.9	49.1	89.5	5.4	3.7	1.4
Recreation and Tourism	2.6	50.5	49.5	82.5	11.8	3.8	1.8
Transportation	1.9	73.1	26.9	84.1	11.8	2.9	1.2
Retail Trade, Other	2.8	43.4	56.6	82.8	14.5	2.0	0.7
Other Distributive	8.2	49.4	50.6	79.3	13.9	6.0	0.8

Source: The Vocational Education Data System information, collected in 1979

Among the 19 distributive education programs, only three--apparel and accessories, automotive and hardware and building materials--were marked by the dominance of one sex or the other. In distributive education, black students were relatively heavily enrolled in insurance and food services programs and lightly enrolled in real estate, hardware, building materials, and finance and credit programs. Technical education programs were also heavily male-dominated, with the one exception of scientific data processing, with six of the 14 programs showing more than 90 percent male enrollment. In this occupational field, black enrollment is highest in police science technology (18 percent) and Hispanic enrollment is highest in scientific data processing (15 percent) and second in architectural technology (9 percent). To the extent that the VEDS 1979 returns and the BOAE data for 1978 permit comparison, it appears that there were slight increases in the proportions of females enrolled in most programs traditionally dominated by males.

Information on the participation of handicapped and limited English-proficiency students in vocational education programs is sparse. The fractions of all enrollments in the major occupational fields accounted for by such students in 1979 are shown in Table VI-10, which indicates that relatively more handicapped students were in agricultural and health occupations than in other fields. Limited English-proficiency students, on the other hand, constituted larger fractions of all enrollments, in trade and industrial and technical occupations than in the other fields.

The pattern of enrollment in vocational education programs by handicapped and limited English-proficiency students differs from State to State. This is shown in Table VI-11, which presents data for ten States. Large differences among States are, of course, to be expected in respect to the proportion of limited English-proficiency students enrolled because States differ in the ethnic composition of their populations. The information that would be

TABLE VI-10

PERCENT OF ALL ENROLLMENTS IN OCCUPATIONAL FIELDS ACCOUNTED FOR BY LIMITED ENGLIGH-PROFICIENCY AND HANDICAPPED STUDENTS, 1979

	Percent Handicapped	Percent Limited English-Proficiency
Agriculture	3.1	0.4
Distributive	1.6	0.3
Health	1.9	0.4
Occupational Home Economics	1.4	0.3
Office	1.4	0.7
Technical	1.3	1.6
Trade and Industrial	0.6	3.4

Source: The Office for Civil Rights Survey of Institutions, conducted in 1979

TABLE VI-11

PERCENT ENROLLMENT OF HANDICAPPED AND LIMITED ENGLISH-PROFICIENCY STUDENTS IN VOCATIONAL EDUCATION IN TEN STATES, 1979

	Percent Handicapped	Percent Limited English-Proficiency
AL	3.3	0.1
CA	na	na
FL	2.1	0.3
ID	2.7	0.1
IL	3.7	0.5
IA	3.9	1.3
NY	2.7	0.3
NC	0.2	- -
TX	2.1	1.0
VT	3.2	- -

Source: The Office for Civil Rights Survey of Institutions, conducted in 1979 required to explain reported State differences in enrollments of handicapped students is not now available.

Compulsory attendance requirements explain the relatively heavier enrollment of handicapped students at the secondary level. As Table VI-12 shows, only slightly more than one percent of the postsecondary vocational education enrollees are reported to be handicapped. In all institutional settings, less than one percent of the enrollees are limited English-proficiency students, with the largest fraction being found in the comprehensive high school.

Teachers

As with other dimensions of the public school vocational education enterprise, there are deficiencies in the information on the numbers and characteristics of its teachers. According to the VEDS information, there were 327,000 in 1979 in secondary and postsecondary schools, including teachers of consumer and homemaking education and industrial arts courses but excluding supervisory and support personnel and others. The total for teaching and related personnel came to more than 370,000. However, the teachers in employment-related occupational programs alone were fewer than 260,000. As Tables VI-13 and VI-14 show, the VEDS count of the teaching personnel of the enterprise is very much in line with the numbers of teachers reported by BOAE for 1977 and 1978. A large portion of teachers are part time, but how many is not known. Only estimates of full-time equivalent (FTE) teachers are available. Nor can it be said how many teach both occupational and nonoccupational courses, or both vocational and nonvocational courses. High school vocational teachers accounted for approximately half of all vocational teachers in 1978. Of the seven major occupational fields, trade and industry account for the largest single group of teachers, roughly 1 out of every 3 teachers. The next largest number is found in office occupations.

TABLE VI-12

PERCENT ENROLLMENT OF LIMITED ENGLISH-PROFICIENCY AND HANDICAPPED STUDENTS IN VOCATIONAL EDUCATION PROGRAMS BY TYPE OF INSTITUTION, 1979

	Occupational Programs		Nonoccupational Programs	
	Limited English-Proficiency	Handicapped	Limited English-Proficiency	Handicapped
Junior and Community Colleges	0.5	1.1	0.6	1.3
Comprehensive High	0.7	2.6	0.7	2.8
Secondary Area Vocational Centers	0.4	5.7	0.4	4.9
Postsecondary Area Vocational Centers	0.3	1.2	0.7	3.4

Source: Office for Civil Rights Survey of Institutions, conducted in 1979

TABLE VI-13

VOCATIONAL EDUCATION TEACHERS BY LEVEL OF EDUCATION

(IN THOUSANDS)

	1977	1978
Secondary	146	185
Postsecondary	60	56
Full-Time Adult	9	19
Part-Time Adult	81	106
Total	335	354

Source: U.S. Office of Education, Status of Vocational Education in 1978

TABLE VI-14

VOCATIONAL EDUCATION TEACHERS AND ENROLLMENTS PER TEACHER BY OCCUPATIONAL PROGRAM FIELD

	1978		1979	
	Teachers (1000's)	Students Per Teacher	Teachers (1000's)	Students Per Teacher
Agriculture	18	57	17	56
Distributive	22	44	20	47
Health	29	27	28	29
Home Economics Occupational	12	38	13	45
Office	70	47	73	46
Technical	21	25	18	27
Trade & Industry	88	39	88	39
Total	260		257	

Sources: The Vocational Education Data System information, collected in 1979, and U.S. Office of Education, Status of Vocational Education, 1978

Data for both FTE teachers and FTE students are needed to construct useful ratios of teachers to students. In their absence, the ratios shown in Table VI-14 merely serve to suggest that occupational field and level of education are among the determinants of student-teacher ratios. For instance, the relatively low student-to-teacher ratios for technical and health occupations probably reflect the fact that the programs are largely postsecondary with mainly full-time students and may require laboratories with a limited number of work stations. The relatively high student-to-teacher ratio for agricultural programs probably reflects the fact that the students, who are mostly secondary, are in classes of conventional size taking academic as well as vocational courses. High school programs may tend to show higher student-teacher ratios because only a part of the student course load is in vocational education.

Reports from State and local agencies point to substantial shortages of vocational education teachers in many instances. A recent study on the supply of and demand for vocational agriculture teachers[11] reports shortages on a scale sufficient to prevent the operation of 100 departments in 1978 and to require the granting of temporary or emergency certificates to 500 teachers. The shortages were not due to a lack of graduates who met teacher certification requirements, but to competition from other fields of employment and to the unavailability for teaching of those pursuing graduate study. In small rural schools, where many agricultural vocational education posts exist, low salaries and demanding work schedules appear to turn many college graduates away from teaching.

Some 188,000 college graduates in 1978 were qualified to teach. Of these, only three percent were in vocational education. The numbers of new bachelor degree recipients in 1979 prepared to teach in the seven occupational fields are shown in Table VI-15. The growth of postsecondary and adult vocational education has led

TABLE VI-15

BACHELOR DEGREE RECIPIENTS QUALIFIED TO TEACH BY OCCUPATIONAL FIELD, 1979

	Number
Agriculture	1532
Distributive	460
Health	366
Occupational Home Economics	1690
Office	631
Technical	537
Trade and Industry	819
Total	6034

Source: Frank J. Atelsek and Irene L. Gromberg, Newly Qualified Elementary and Secondary School Teachers, 1977-78 and 1978-79. Higher Education Panel Report, Number 45, American Council on Education, February 1980 to increased reliance upon teachers with mastery over occupational skills but not prepared for teaching through college degree programs. Most States, however, provide for on-the-job training of such instructors in teaching methods and other techniques. Certification requirements for high school teachers make it more difficult to cope with shortage situations at the secondary level than at the postsecondary or adult levels, for which part-time instructors can be recruited from the personnel of local industrial and business enterprises. Such teachers may insure that the instruction is in current occupational practices using up-to-date equipment. However, such instructors may lack certain pedagogical skills or be ill-prepared to remedy deficiencies in basic skills of their students. Moreover, when postsecondary institutions employ instructors who are not certified, the extent to which high schools can arrange with such institutions to provide vocational education for their student is limited.

Funds and Expenditures

Exactly how much is spent each year on the nation's public vocational education enterprise is not known. The requirements to report to the Federal government on funds and their expenditures revolve primarily around the flow of Federal dollars to the States under the Vocational Education Act (VEA) of 1963 as amended, the matching of those dollars by State and local funds, and the vocational education programs set forth in the State five-year and other vocational education plans. Consequently, expenditures are not reported to the Federal government for programs that are neither Federally-funded nor set forth in State plans. Moreover, educational expenditures not exclusively linked to the provision of vocational education programs and services are usually not reported. Finally, other Federal funds contributing to the resources of the public vocational education enterprise are not usually reported by the States in the information on vocational education which they submit to the Federal government. Clearly, the nation invests much more in its public vocational education enterprise than is conventionally reported and generally realized.

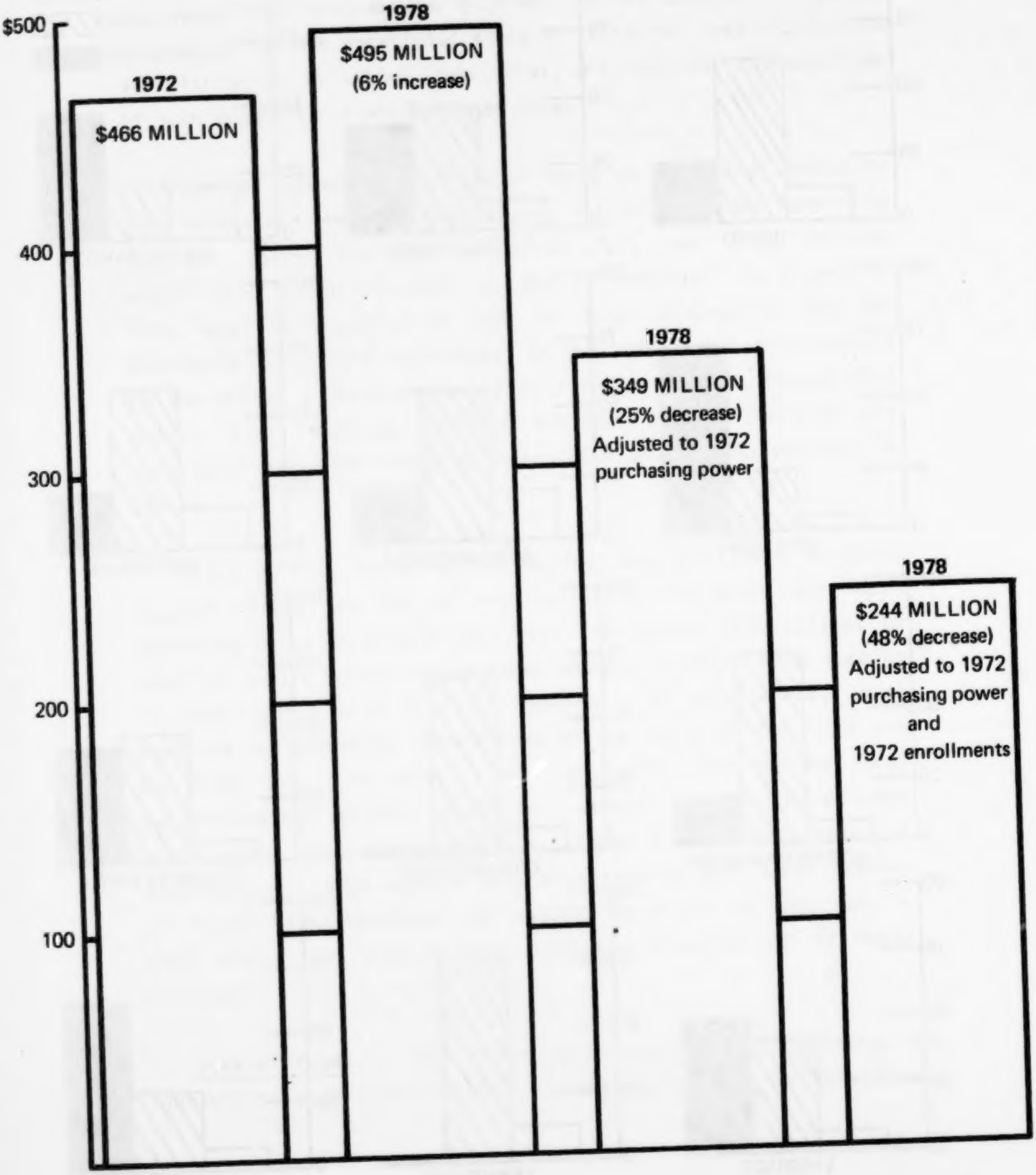
VEA and matching funds. In fiscal year 1978, VEA expenditures reported by BOAE, including carry-over funds, came to about \$495 million. Reported State and local matching expenditures were almost \$5.1 billion, so that total expenditures for Federally-funded vocational education programs reached almost \$5.6 billion.

VEA expenditures in current dollars increased modestly by only six percent between 1972 and 1978. Because of inflation, however, the level of Federal expenditures over those years declined in fact. Measuring in 1972 dollars, it fell about one-fourth by 1978, as Figure VI-1 shows. In relation to the growth in reported enrollments, Federal expenditures decreased even more. Since State and local expenditures rose sharply and Federal expenditures were relatively stable between 1972 and 1978, the Federal share in total expenditures declined substantially. After 1969, the States were not required to report State and local expenditures separately, but some still do. What share of total vocational education expenditures the States now account for nationally is not known. It had been about one-third in 1969, the last year for which separate State and local expenditure data were reported.

State, local, and Federal spending on vocational education can be detailed for 12 States which provided estimates in their State plans for all three sources of funding projected for 1979. The share of each source in the projected funding of vocational education in these 12 States is shown in Figure VI-2, which also makes clear the variations among States in the relative importance of each source. State funds account for a substantial share of all vocational education funds in Tennessee and North Carolina, for example, but for relatively small fractions in Vermont and South Dakota. Local funds represent less than one-twentieth of all projected expenditures in two States (Connecticut and Tennessee) and three-fifths or more in others (Kansas and Vermont).

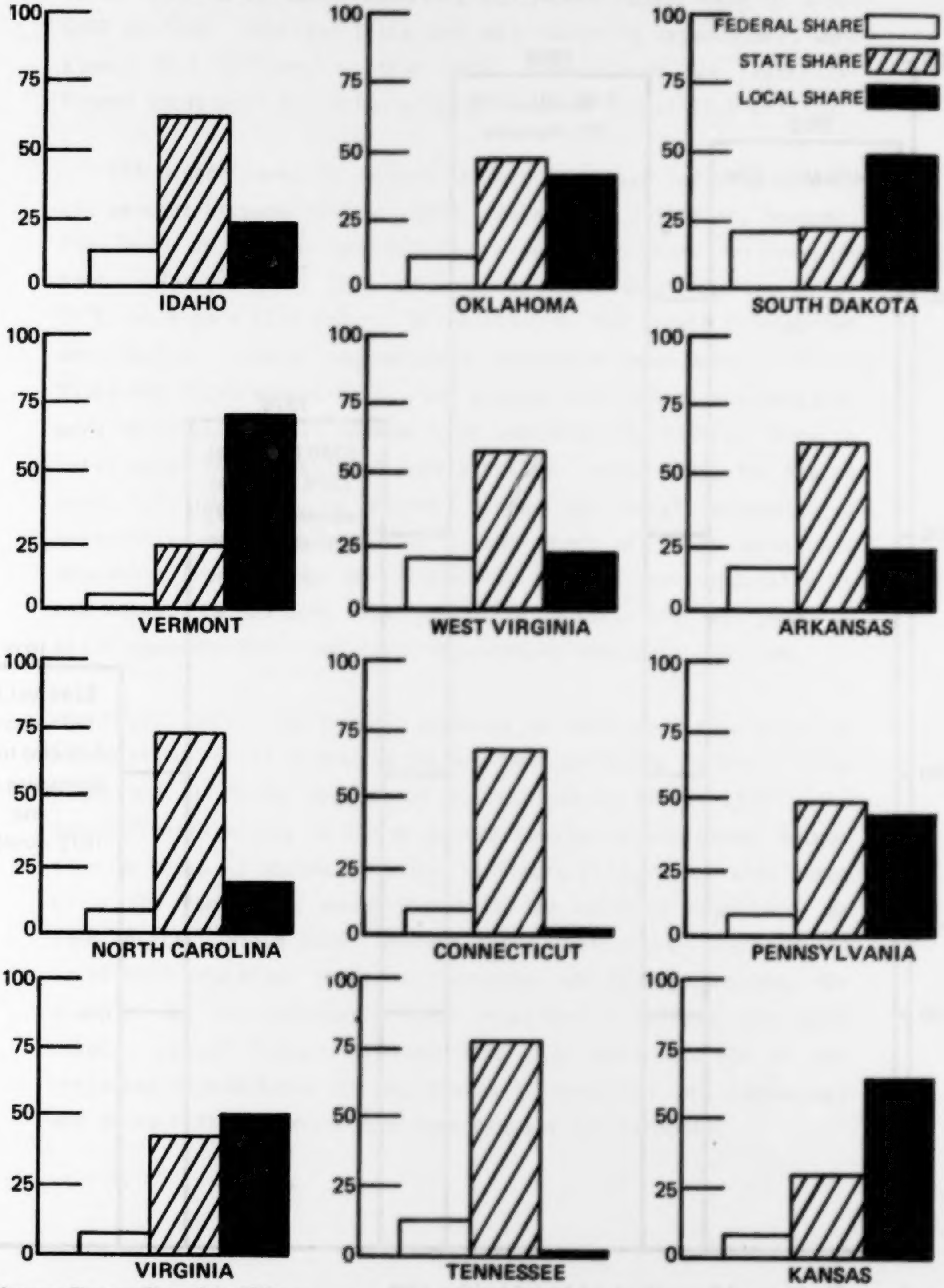
Figure VI-1

EXPENDITURES OF VEA FUNDS BY THE STATES, 1972 AND 1978, IN TERMS ADJUSTED FOR INFLATION AND ENROLLMENT GROWTH



Source: The Bureau of Occupational and Adult Education, 1978

Figure VI-2
FEDERAL, STATE, AND LOCAL SOURCES OF FUNDS:
PERCENTAGES FOR TWELVE STATES PROJECTED FOR 1979



Sources: Five-year Plans of the 12 States

Reported State expenditures understate the State investment in vocational education. In comprehensive high schools and community colleges, vocational education programs and services are part of the educational programs and offered. In the absence of separate accounting for the vocational share of costs for institution-wide administration, utilities, facilities, and services, the magnitude of such expenditures would not be known.

Reported expenditures of local funds on vocational education also understate the local investment, not only because supporting indirect costs are not accounted for, but also because expenditures on direct costs may not be reported. As a general rule, what is reported is left to local discretion, and the maintenance of effort requirement of the 1976 legislation appears to operate as a disincentive to full reporting. As Figure VI-2 shows, local funds may account for the largest share of all vocational education funds in some States and for the smallest in others.

State policy, including tax policy, and the level of State support affect the mix of and variations in State and local expenditures on vocational education. In States that attempt to equalize public school expenditures among districts, local funding is inextricably tied to State funding. In some States, local revenues for education are derived on the basis of tax rates set by State law. In others, the tax ratios are set by local decisionmaking either with or without State established constraints. Dependence upon local funds differs among types of institutions. High schools rely most heavily upon local sources of funds. Postsecondary institutions generally do not, but in some States they are in part supported directly out of local revenues.

Uses of funds. The States enjoy considerable discretion and flexibility under the Education Amendments of 1976 to determine the uses of most of the Federal dollars they receive. How VEA and States and local matching funds are deployed against the array of acceptable purposes results from a multitude of decisions at all three governmental levels. The broad patterns of use that appear in nationally aggregated data for 1978 reported to BOAE[12] hide differences among the States in the uses of Federal, State, and local funds.

Of the basic grant portion of the Federal allocation to the States (Subpart 2 of the Education Amendments of 1976), the vast majority of the funds--about 4 out of every 5 dollars--were expended on instructional programs. The same proportion of combined State and local funds were also spent on instructional programs. The next largest share of Federal basic grant dollars--less than 1 out of 10 dollars--were expended on State administration, and the third largest, 1 out of 20 dollars, was spent on construction. Most State and local funds were expended on instructional programs. The second and third largest shares of combined State and local funds were accounted for by local administration and construction.

Of the Federal funds earmarked for "Program Improvement and Supportive Services" (Subpart 3 of the Education Amendments of 1976), the largest single share--more than 1 out of every 3 dollars-- was spent in 1978 on guidance and counseling. The next largest share was expended on research, exemplary and innovative programs, curricular development, and the Research Coordinating Units (RCUs)--more than 3 out of every 10 dollars. The third largest went for pre- and inservice education and training of teachers--less than 1 out of every 5 dollars. The deployment of combined State and local funds for "Program Improvement and Supportive Services" ran as follows: the largest share--more than 6 out of every 10 dollars--was expended on counseling and guidance; the second largest, on local administration--less than 1 out of every 8 dollars; and the third, on pre- and inservice education and training--less than 1 out of every 8 dollars.

Expenditure data for 1979 reported by VEDS show similar patterns in the uses of Federal and combined State and local funds. Four-fifths of the Federal basic grant dollars was spent on instructional programs, as Table VI-16 shows. In 1979, State administration and construction accounted for the second and third largest shares of Federal dollars. An even larger share of combined State and local funds was spent on instructional programs, more than 86 percent. As in 1978, expenditures on local administration and construction ranked second and third in significance. Insignificant or no State and local expenditures were reported for the following seven legislative purposes of Subpart 2: sex equity personnel, displaced homemaker programs, energy education, stipends, placement services, support services for women, and day care.

The patterns of use of Federal and combined State and local funds for "Program Improvement and Supportive Services" purposes in 1979 were similar to those in 1978. The largest share of Federal dollars, as Table VI-16 shows, was spent on guidance and counseling, and the next two largest shares were accounted for, first, by research, exemplary and innovative programs, curricular development, and the RCUs and, second, by pre- and inservice education and training of teachers. Seventy percent of the combined State and local funds for "Program Improvement and Supportive Services" were expended on guidance and counseling. Next in order of importance--almost 11 percent of all such expenditures--was the share for research, exemplary and innovative programs, curricular development, and RCUs. The third largest share was accounted for by pre- and inservice education and programs.

Other Sources of Federal Funds

Funds available under Federal legislation other than the Vocational Education Act have contributed and continue to contribute

TABLE VI-16

FEDERAL AND NON-FEDERAL EXPENDITURES BY LEGISLATIVE PURPOSE, 1979

(IN MILLIONS)

Subpart 2: Basic Grant

	Federal	Percent of Total	Non-Federal	Percent of Total
TOTAL	385.5	100.0	4451.2	100.0
Vocational Education Programs	308.4	80.0	3834.5	86.1
Sex Equity Personnel	2.6	0.7	0.0	0.0
Displaced Homemakers	1.7	0.4	1.3	0.0
State Administration	36.5	9.5	44.1	1.0
Work Study	5.2	1.3	5.3	0.1
Cooperative	7.7	2.0	97.1	2.2
Energy Education	0.3	0.1	0.2	0.0
Construction	12.1	3.1	149.4	3.4
Stipends	0.6	0.1	0.0	0.0
Placement Services	0.6	0.2	1.8	0.0
Industrial Arts	2.4	0.6	87.9	2.0
Support Services for Women	0.5	0.1	0.3	0.0
Day Care	0.2	0.1	0.7	0.0
Residential Schools	0.9	0.2	3.3	0.1
Contracted Instruction	0.2	0.1	3.1	0.1
Local Administration	5.7	1.5	222.2	5.0

Subpart 3: Program Improvement and Supportive Services

TOTAL	107.3	100.0	240.0	100.0
State Administration	9.6	8.9	8.1	3.4
Guidance & Counseling	38.0	35.4	168.4	70.2
Preservice/Inservice	21.0	19.5	20.6	8.6
Grants to Overcome Sex Bias	1.9	1.8	0.2	0.1
Local Administration	1.9	1.8	16.9	7.1
Research	6.0	5.6	3.0	1.2
Exemplary Programs	4.6	4.3	4.6	1.9
Curriculum Development	7.2	6.7	5.3	2.2
RCUs	17.1	6.0	12.9	5.3

Source: The Vocational Education Data System information, collected in 1979

to the resource base of the nation's public vocational education enterprise. The Public Works and Economic Development Act of 1965 and the Applachian Regional Development Act of the same year have been particularly important sources of funds for capital investments and demonstration programs in vocational education. Also significant, but on a smaller scale, have been the Tennessee Valley Authority Act of 1933 and the Rural Development Act of 1972. Under these several Acts, funds have been available for building new schools, repairing old ones, providing additional classrooms, constructing roads to make schools more accessible, and purchasing equipment. These funds, distributed through projects and not by formula, have been designed to improve the economic well-being of regions or communities rather than to assist States.

The Appalachian Regional Development Act (ARDA) of 1965 sought to improve the economies of West Virginia and those parts of 12 other eastern States included in the Act. It created a regional commission, consisting of the governors of the 13 States, charged with achieving this goal through programs for economic and community development. The Appalachian Regional Commission (ARC) is authorized under Section 211 of the Act to provide up to 80 percent of the costs of new vocational education facilities and to fund vocational education demonstration projects. It may also make supplementary grants to poor communities to be used to match other Federal grants-in-aid, including those made under the Vocational Education Act. Assisting school districts to construct vocational education facilities has been a high priority of the ARC, and expenditures on this purpose rank second in importance to those of highway and road construction.

From 1966 to the early 1970's, ARDA funds were used to construct area vocational centers capable of providing a wide range of vocational education programs to small school districts themselves unable to offer them. By the close of the 1970's, relatively well-equipped area vocational centers served most of Appalachia. In fiscal year 1979 ARC expenditures for vocational education purposes came to almost $17.7 million. Annual expenditures by the Commission for vocational education purposes for the years 1966-1979 are shown in Table VI-17, which also compares them with estimated VEA expenditures in the Appalachian region. Table VI-18 shows cumulative ARC expenditures for the period 1966-1979 for each of the 13 Appalachian States, together with the peak year expenditure for each State.

The Public Works and Economic Development Act of 1965 sought to achieve economic development, and thus reduce poverty, in areas marked by "substantial unemployment and underemployment" outside of the Appalachian region. It created the Economic Development Administration (EDA) in the Department of Commerce which has relied upon education and vocational education as major instruments for attaining its goals. Section 517 of the Act authorizes grants to public institutions for "Education Demonstration Projects," and EDA expenditures in 1979 for vocational education purposes alone came to $9.2 million. For the period 1966-1979, educational expenditures under the Act came to almost $671 million. Almost half of this amount, or $327 million, went directly to vocational education institutions. The distribution of funds by type of recipient, according to the Department of Commerce classification scheme, is shown in Table VI-19.

Public works legislation adopted in 1976 (the Local Public Works Program) and in 1977 (the Public Works Employment Act) has also contributed to the resources of the public vocational enterprise. Between them they resulted in educational expenditures of about $700 million, and in 1977 of expenditures of about $170 million on area vocational education facilities alone.

TABLE VI-17

APPALACHIAN REGIONAL COMMISSION EXPENDITURES ON VOCATIONAL EDUCATION PURPOSES AND VOCATIONAL EDUCATION ACT EXPENDITURES IN APPALACHIAN REGION, 1966-1979

(IN THOUSANDS)

Year	ARC	VEA (estimated)	Ratio ARC/VEA
1966	6,740	21,000	0.32
1967	23,607	23,600	0.88
1968	20,798	23,600	0.88
1969	21,434	23,000	0.93
1970	32,671	27,000	1.17
1971	27,307	35,700	0.76
1972	40,940	41,900	0.98
1973	29,977	43,400	0.69
1974	31,074	42,100	0.74
1975	37,361	48,300	0.77
1976	22,910	48,900	0.47
1977	19,425	48,000	0.40
1978	16,425	44,500	0.37
1979	17,668	n.a.	n.a.

Sources: Derived from Appalachian Regional Commission and BOAE Data

TABLE VI-18

APPALACHIAN REGIONAL COMMISSION EXPENDITURES ON VOCATIONAL EDUCATION PURPOSES BY STATE, 1966-1979 AND FOR PEAK YEARS

(IN THOUSANDS)

State	Expenditures 1966-1979	Year	Peak Year Expenditure
AL	38,034	1972	4,104
GA	24,061	1975	2,704
KT	32,255	1974	3,399
MD	10,699	1970	1,980
MS	24,066	1978	2,248
NC	28,031	1975	3,101
NY	18,844	1969	2,154
OH	26,755	1974	3,492
PA	38,970	1973	4,749
SC	24,554	1975	4,041
TN	22,935	1972	4,838
VA	31,382	1975	6,414
WV	33,023	1972	6,810
Total	350,609		

Source: Derived from Appalachian Regional Commission Data

TABLE VI-19

ECONOMIC DEVELOPMENT ADMINISTRATION EXPENDITURES FOR VOCATIONAL EDUCATION PURPOSES, 1966-1979

(IN THOUSANDS)

Types of Recipient	Dollars
Vocational High Schools	$ 19,239
Vocational Centers	296,123
High Schools	175,646
Consolidated High Schools	151,261
Community & Junior Colleges	28,631
Total	$ 670,900

Source: Constructed from Economic Development Administration Data

CETA Funds

Another source of Federal funds which has implications for the resources and functions of the public vocational education enterprise lies in provisions of the Comprehensive Employment and Training Act of 1973, as amended. Both that legislation and the Education Amendments of 1976 speak to the coordination of CETA and vocational education programs. Without attempting to treat that complex subject here, a brief account of the ways in which CETA monies flow to the vocational education enterprise and of what is known about the scale of those funds is in order.

One section of the CETA legislation (Title I of the 1973 Act/ Title II of the 1978 Amendments) directly mandates the application of funds to vocational education programs. This section, dealing with "Supplemental Vocational Education Assistance," provides that a small percentage of the funds available to the Secretary of Labor--initially 5 percent and subsequently 6 percent--is to be granted to governors for financial assistance through State vocational education boards, "to provide needed vocational education services in areas served by prime sponsors," which are decentralized providers of training and related programs. These grants to the governors, according to the Department of Labor, came to a cumulative total of more than $350 million for the period fiscal year 1975 to fiscal year 1978. In fiscal year 1978 alone, they amounted to $118.4 million.[13]

Prime sponsors may contract with vocational education institutions to provide training and other services for CETA clients, but firm national data on the extent to which they do so are lacking. Under Title II of CETA, more than $754 million were available in fiscal year 1978 to prime sponsors for classroom training. (This sum does not include the grants to governors for vocational education services mentioned in the preceding paragraph.) This is defined as any type of training "normally conducted in an institutional setting," and includes, but is not limited to, vocational education. Precisely how much classroom training money is expended for programs in vocational education institutions is not reported.

Under Title III of the CETA legislation, public educational agencies may be funded to provide training and employment services for such target populations as American Indians, migrants, and older workers. Schools are being used to provide the services,[14] but information is lacking on the scale of involvement of vocational educational institutions.

Before the effects of the 1977 Amendments to the CETA legislation, known as the Youth Employment and Demonstration Projects Act (YEDPA), were fully felt, the State directors of vocational education were surveyed on CETA funds flowing during the fiscal year beginning October 1, 1977, to State vocational education agencies and to local agencies and schools. According to responses from 54 State directors, they were together administering a total of $152 million in CETA funds in their States. Twenty-three State directors estimated that more than $210.5 million in CETA funds were being received by LEAs directly from prime sponsors in their States.[15]

With the adoption of YEDPA, a new fiscal linkage emerged between CETA and educational institutions. This resulted from the requirement that 22 percent of the funds available to prime sponsors under Section 343(a)(1) "shall be used for programs for in-school youth carried out pursuant to agreements between prime sponsors and local educational agencies." This section of the legislation, it should be noted, does not mention vocational education. As interpreted by the regulations, it calls upon the LEA and the prime sponsor to agree upon how funds are to be spent. The funds for in-school youth do not automatically go to public educational institutions. They may be used for stipends or to secure services provided by other organizations.

The volume of YEDPA funds flowing into the public schools is difficult to determine, but there are grounds for estimating that it is substantially larger than the 22 percent set aside.[16] It is important to understand that other Titles of CETA are sources of funds flowing to public schools. New York City provides a concrete illustration of this. In 1979, its public schools received $5.25 million in CETA funds under the 22 percent set-aside provisions of YEDPA, but in addition they received $4 million in Title II classroom training dollars.[17] The available evidence suggests that CETA funds in the order of $1 billion, if not more, flow to educational institutions. Of this amount, an as yet undetermined portion is received by vocational education institutions.[18]

Organization and Governance

The diversity of the vocational education enterprise results in part from differences in the organization and governance of the educational system among and within States. Federal legislation recognizes the primary responsibilities of the States and localities for the enterprise. It does, however, require each State to designate a single State board as responsible for vocational education. That board may either administer vocational education programs or delegate authority for their administration to other State agencies. Thus, several State agencies may be charged with carrying out policy functions and program operations under a single State board.

There is also diversity among and within States in the organization and authority of the local school districts--the local education agencies (LEAs)--and the local institutions (usually postsecondary) or other entities eligible to receive Federal funds. The "eligible recipients" that are LEAs may take different forms, such as traditional school districts, specially created school districts, intermediate or regional school districts, or area vocational centers. The differences in organization and governance at the State and local levels are accompanied, as will be seen, by commonalities.

State Organization

In each State, a sole State agency or board, as has been said, must be designated as responsible for the application for Federal vocational education funds. It may be either an elected or appointed body. The locus of this authority is left to the discretion of the State. Some States have used existing organizations, while others have created new independent boards. Each State's mode of governing its vocational education system and administering the use of Federal funds has evolved separately since 1917. However, the moderating effects of shared knowledge and experience, as well as of emulation, can be seen in similarities among the resulting systems.

One study conducted in 1977[19] identifies the different kinds of State boards and State agencies and classifies them on the basis of their interrelationships and educational levels--i.e., secondary, postsecondary, and adult. One type of organization has an independently constituted State board which does not exercise direct authority over the local agencies that operate programs. The implementation of policies is the responsibility of one or more State education agencies. This is the case in the State of Washington, where the operation of programs is the responsibility of the State Department of Education and the State Board of Community Colleges. A second type has an independently constituted State board, which exercises authority over the State agencies that operate programs. Colorado and Kentucky are examples of this form of organization. A third type has an independently constituted State board which also serves as the agency responsible for secondary and/or postsecondary vocational education, as in Wisconsin, where the Board of Vocational, Technical, and Adult Education, as a State agency operates postsecondary and adult programs and delegates secondary programs to the Department of Public Instruction. In the fourth and most common type, the responsibilities of the State board are assumed by an existing board with direct authority over one or more State agencies responsible for vocational education. In 1977, this was the case in 46 States and territories. In 17 of these, an existing board was responsible only for vocational education at the secondary education level, as in Delaware and Massachusetts. In 29, an existing board was responsible for both secondary and postsecondary vocational education, as in Idaho and Michigan.

The variations in the relationship between State boards and operating agencies are many. The difficulty of classifying the different relationships is illustrated by Florida, where the State Board of Education has authority for all public education. The Commissioner of Education is a member of the State board and administers the Department of Education. The Divisions of Vocational Education, Public Schools, Community Colleges, Blind Services and the University System make up the units of the Department of Education. The Division of Vocational Education has the leadership responsibility for the administration of vocational education at all levels, secondary, postsecondary and adult. The Division of Vocational Education has primary responsibility for administration of all VEA funds to eligible recipients, and initiates and implements coordination with the other divisions.

In eight States a single State agency is responsible for all of the vocational education enterprise. In some States, three State agencies are responsible for different categories of eligible recipients of VEA funds. In North Dakota, three agencies are responsible for the vocational programs offered in different kinds of secondary and postsecondary schools. In this State, however, the agencies report to three different boards--the State Board of Education, the State Board of Vocational Education, (the designated single State board), and the State Board of Higher Education. In Iowa, by contrast, a single State agency which reports to the State Board of Education (which is also the designated State board), is responsible for all vocational education programs. These differences in formal structure and organization carry with them differences in the breadth and extent of authority located in the sole State agency--the State board-- qualified to apply for and receive Federal funds.

Local Education Agencies and Vocational Education Institutions

Uniformity is lacking at the local as well as the State level. Different forms of local education agencies are responsible for vocational education programs, and different kinds of institutions provide them. In addition, there are different kinds of arrangements for funding vocational education programs at the local level. In short, variety characterizes the district organizations, the institutions, and fiscal arrangements. For instance, a LEA offering vocational education in its comprehensive high school may also be the site of an area vocational center serving several surrounding districts. On the other hand, a LEA may not have within its boundaries an institution offering vocational education programs and may be utilizing those offered by one in a neighboring district.

Vocational education programs are offered today in six different types of public institutions as Table VI-20, describing their distinguishing features, shows. Of the many types of vocational education institutions, probably none may typify the Federal effort to modernize and expand vocational education better than the area vocational center. Federal support for specialized vocational schools serving several school districts first came wit the National Defense Education Act of 1958. The intention wa both to increase the supply of technicians and expand occupationa programs in rural areas, which were for the most part restricte

TABLE VI-20

PUBLIC VOCATIONAL EDUCATION INSTITUTIONS

Institutional Type	Definition
Comprehensive High School	A comprehensive high school is a general school offering programs in both vocational and general academic subjects, but in which the majority of the students may not be enrolled in programs of vocational education.
Vocational High School	A vocational high school is specialized secondary school that offers a full-time program of study in both academic and vocational subjects and in which all or a majority of the students are enrolled in vocational education programs.
Secondary Area Vocational Center	A secondary area vocational center is a shared-time facility that provides instruction in vocational education only to students from throughout a school system, or region. Students attending an area vocational center receive the academic portion of their education program in regular high schools and other institutions.
Community College	A community college is a two-year postsecondary degree granting institution which may also award certificates and licenses offering a comprehensive program of instruction in both general and vocational-technical education and offering a transfer program to higher education institutions.
Technical Institute	A technical institute is a two-year postsecondary degree granting institution offering instruction primarily in vocational and technical education and whose educational programs are primarily directed toward immediate job placement.
Postsecondary Area Vocational School	A postsecondary area vocational school is a non-degree granting institution (or an institution offering a degree that is not recognized as a collegiate degree that is not recognized as a collegiate degree by the appropriate regional accrediting commission) offering instruction in vocational and technical education only, and whose educational programs are terminal.
Other Postsecondary Institution	Another postsecondary institution is a four-year college or university offering two-year degree programs in vocational or technical education.

Source: Adapted from National Study of Vocational Education Systems and Facilities, Vol. 1

to vocational agriculture and home economics. With the Vocational Education Act of 1963, one third of the States' allotment was to be used either to construct area vocational education facilities or to educate nonsecondary students. This provision and funds from economic development programs, as has been seen, provided hundreds of millions of dollars of Federal aid for the construction of area vocational centers.

Here again there are differences among the States in the emphasis given to the development of area vocational centers. It was relatively great in Southeastern and Northeastern States. Alabama, for example, has 82 area vocational centers, South Carolina 55, as well as 16 technical institutes serving high school completors, New Hampshire 26, and New York 44. Kentucky reports that an area vocational center is located within 25 miles of every industrial site in the State, and has 68 secondary area vocational centers and 26 postsecondary centers. In Midwestern States, secondary vocational education programs are likely to be offered in comprehensive high schools, with the area vocational centers in most States serving postsecondary students. In Iowa there are 15 of the latter. Wisconsin has 16 postsecondary districts with 38 campuses offering a wide variety of programs leading to associate degrees and vocational diplomas and also serving other purposes. In Ohio, however, the area vocational centers are secondary schools. Area vocational centers are far less common in the more sparsely populated States, where consolidation is less feasible because of the distances between communities.

The definition of an area vocational education school has changed since 1963 and now includes any facility that offers five or more different vocational programs. Today, an "area center" may be (1) part of an existing high school; (2) a department of a community college; (3) a specialized vocational high school; (4) a technical institute; (5) a secondary or postsecondary cooperative, multi-district center; or even (6) a four-year institution of higher education. In effect, the meaning of the term "area" is left to the discretion of the State.

The local school district or education agency is the unit responsible for administering public elementary and secondary education in every State except Hawaii. A district is a jurisdiction with taxing authority for the support of public education and a school board responsible for local education policy. School districts also merge or cooperate in order to offer more educational services than they can afford independently. When this occurs without a concomitant consolidation of fiscal and administrative authority, the organizational structure can take many forms. A school board may consist of one of the two or more district boards involved in the consolidation; be constituted from representatives of each participating board; or be a new, independent board. Funds may also be derived from several sources: for instance, from one LEA with taxing authority; from tuition from participating districts; or from a fixed, predetermined assessment of the participating districts.

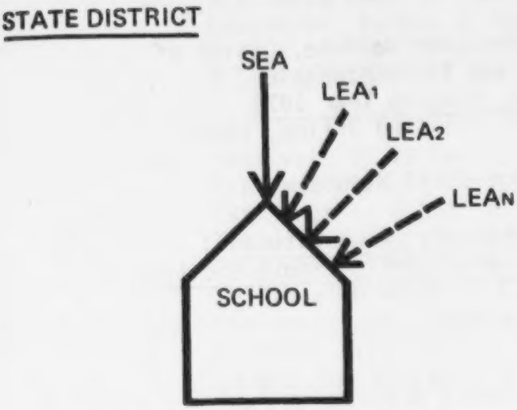
Variety marks district organizational and fiscal arrangements across the nation, but dominant patterns appear in certain locations. Large cities are usually "regular" districts. Where the State serves as the local education agency fiscally, and support comes from State appropriations, most "State" districts are postsecondary. In the Southeast, however, many "State" secondary districts are also found. In eight States--Vermont, New Hampshire, Maine, Rhode Island, Virginia, Missouri, Indiana, and Arkansas--secondary vocational education is offered through so-called "host" districts which possess taxing authority. Neighboring districts may enroll students either on a tuition or fixed assessment basis. Elsewhere, as in Ohio, Alabama, and South Carolina, there are "joint" or "shared" arrangements for secondary vocational programs in which the participating districts support the providing institution through tax revenue. Texas, Massachusetts, and Michigan have "special" school districts for postsecondary vocational education, but many others have "special" districts for postsecondary vocational education. A "special" district has taxing authority independent of the local districts and serves a particular region.

Shared services are offered primarily by rural districts as an alternative to centralization. Iowa, Illinois, and Missouri, for example, allow students to cross district boundaries in order to enroll in programs not offered in their own schools. Elsewhere, as in the Dakotas, shared services are also provided to participating districts through mobile units. Fiscally, districts may either allocate part of their budgets to the shared services or arrange for non-financial exchanges of services. A visual representation of the diverse forms that district organization may take, showing their different implications in terms of students and fiscal arrangements, is provided by Figure VI-3.

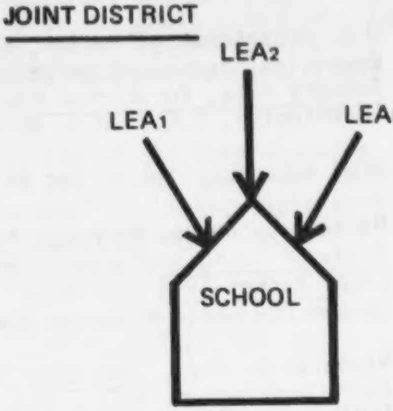
Figure VI-3

FORMS OF DISTRICT ORGANIZATION

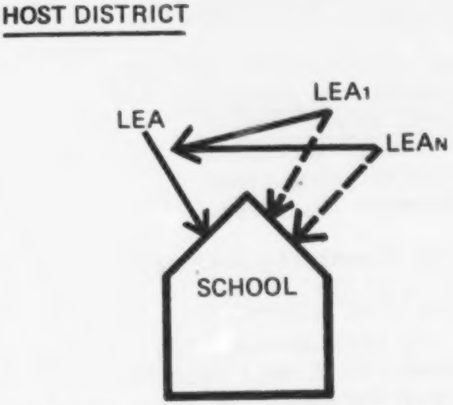
← DOLLARS AND/OR STUDENTS ←‑‑‑ STUDENTS ONLY


STATE DISTRICT
SEA
LEA$_1$
LEA$_2$
LEA$_N$
SCHOOL

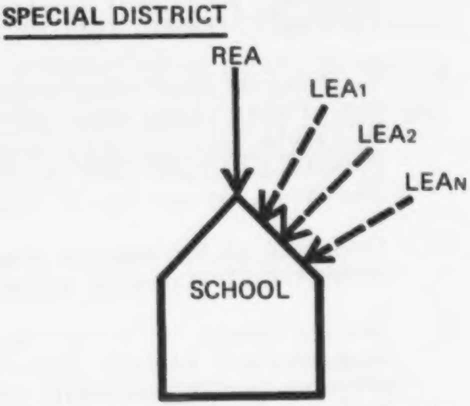
Institution supported directly by State Education Agency


JOINT DISTRICT
LEA$_2$
LEA$_1$
LEA$_N$
SCHOOL

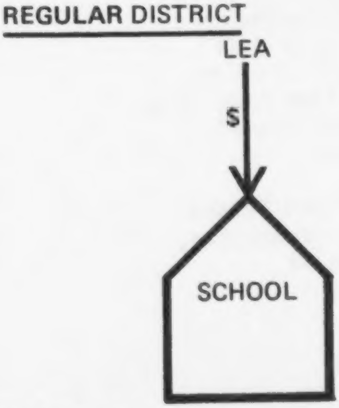
Districts have joint taxing authority for support of institution


HOST DISTRICT
LEA$_1$
LEA
LEA$_N$
SCHOOL

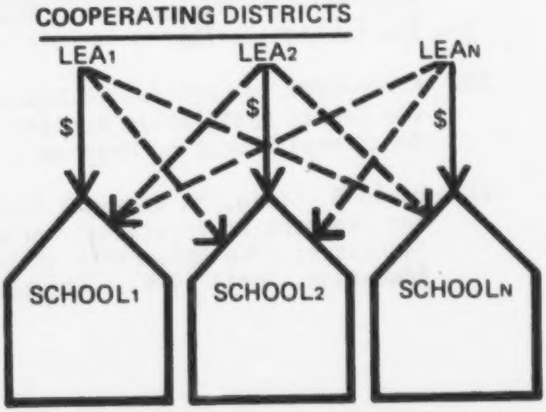
Host district has taxing authority & participating districts are assessed or pay tuition


SPECIAL DISTRICT
REA
LEA$_1$
LEA$_2$
LEA$_N$
SCHOOL

Regional (multidistrict) taxing authority


REGULAR DISTRICT

Single district with taxing authority


COOPERATING DISTRICTS
LEA$_1$
LEA$_2$
LEA$_N$
$
$
$
SCHOOL$_1$
SCHOOL$_2$
SCHOOL$_N$

Regular districts sharing services either through tuition or negotiated exchanges

FOOTNOTES

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7. Conducted at Northern Arizona University, Flagstaff, Arizona, under the direction of Arthur M. Lee.

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14. *Employment and Training Report of the President*. Report to Congress (Washington, D.C.: U.S. Department of Labor, 1979), p. 157.

15. Wisconsin Research Coordinating Unit, *Cooperation Between Vocational Education and CETA* (Madison, Wisconsin: Wisconsin Board of Vocational, Technical and Adult Education, January, 1979).

16. See Sol Pelavin, *The Effects of CETA Funding on Education Services for Disadvantaged Youth*, Draft Interim Report (Durham, North Carolina: NTS Research Corporation, 1980) and Gregory Wurtzburg, *Overview to the Local Focus on Youth*, (Washington, D.C.: National Council on Employment Policy, 1979).

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18. William H. Wilken, *CETA's In-School Spending*, Draft Report (Washington, D.C.: Educational Testing Service, Education Policy Research Institute, June 13, 1980), p. 19.

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CHAPTER VII. DETERMINING THE EFFECTS OF VOCATIONAL EDUCATION ON PARTICIPANTS

The task of determining the effects of schooling in general, or of vocational education in particular, on students' subsequent occupational and educational attainment is fraught with obstacles. Many factors other than school curriculum affect the economic and noneconomic experiences of learners after their years in school. In addition to curriculum, heritability, family background including socioeconomic status, cognitive ability, school quality, and labor market conditions all influence achievements of learners after school. The effect of any one of these factors cannot readily be disentangled from the others. Moreover, it is not known whether factors that influence a student's choice of curriculum, such as his family's socioeconomic status, have a greater effect on his success after his school years than participation in the curriculum itself.

In addition to these difficulties in ascertaining curricular effects, certain technical problems are encountered in efforts to determine the effects of vocational education programs. The first problem concerns the classification of students as vocational. Disagreement between school administrators' classifications of vocational education students in secondary school and the students' self-reports has been found to be as high as 34 percent.[1] In addition, the degree of exposure to vocational course content necessary for a student to be classified as vocational has not been consistently agreed upon. A second problem in determining effects of vocational education is the diversity among vocational education programs. There is no reason to expect that students enrolled in the different occupational specialties within vocational education will attain similar levels of earnings or other outcomes. Still another difficulty concerns the identification of a comparable group of nonvocational students with whom to contrast outcomes of vocational students. Ideally, this group would be similar in all respects to students in the vocational curriculum except for participation in the vocational curriculum. Since a group of this nature does not exist, the most relevant comparison group would seem to be students in the general curriculum. The academic (college preparatory) curriculum differs from both the general and vocational curricula in purpose and characteristics of its student body, and it is considered more likely that vocational students would enroll in the general than the academic curriculum if the vocational curriculum were not available.[2]

It was with awareness of these difficulties that NIE, through contract with The Huron Institute, undertook an examination of the effects of secondary and postsecondary vocational education programs on participants. Although this study was not specified in the mandate for the Vocational Education Study, any general consideration of vocational education clearly must address its expected results for participants. Effects on participants' subsequent economic and noneconomic experiences are considered in this study. Economic effects include, for example, employment and unemployment experience, wage rates, and occupational advancement. Noneconomic consequences include further education, acquisition of basic skills, and leadership. Inferences pertaining to effects of vocational education are to be drawn from findings of existing studies and from reanalyses of extant national longitudinal data sets. Only findings of existing studies will be presented in this report. They include national longitudinal studies as well as reports since 1968 from States, local education agencies, and institutions.

Goals and concepts stated directly or implicit in the vocational education legislation since 1963, or in reports of studies on which the legislation was based, indicate how vocational education has been intended to benefit individuals in recent years. The intended outcomes of vocational education for learners, as reflected in the goals of the vocational education legislation, provide a framework for examining prior research and reanalyzing extant data. These outcomes are gainful (paid) employment above the unskilled level; academic credentials for postsecondary enrollment; occupational knowledge and skills; basic skills in reading, writing, and mathematics; ability to cope with changes in jobs; long-term occupational advancement; years of schooling attained; performance in academic core subjects; employability skills; and leadership.

For a number of these outcomes, reliable results from methodologically sound studies are available and will be reviewed following a brief summary. They are:

1) gainful employment, as indicated by employment status, occupational status level, hourly wages, number of hours or weeks employed, relevance of training to job, employers' satisfaction, type of employment, and job satisfaction;
2) academic credentials for postsecondary enrollment;
3) occupational knowledge and skills;
4) basic skills; and
5) years of schooling.

Research on the other outcomes of vocational education mentioned previously is extremely limited. Moreover, very little is known about the effects of vocational education at the postsecondary level. Reanalysis of extant longitudinal data, where such exist, will be undertaken on these subjects and reported at a later date.

Summary of Research

What do the findings of prior research tell us about the effects of vocational education in secondary school on participants? To answer this question, it is useful to draw a composite picture of the typical vocational student and his or her counterpart in the general curriculum both during high school and in the years after high school.

While in high school, the typical vocational student reads, writes, and computes with about the same level of proficiency as a student in the general curriculum but is less familiar than the general curriculum student with several occupations, particularly occupations requiring a college education. After high school, although his hourly wage and the number of hours he works per week will probably not be very different from those of the general curriculum graduate, the male vocational education graduate is less likely to be unemployed, especially if he is black, and he is more apt to be employed as a semi-skilled or skilled worker than is the male general curriculum graduate. The vocational student is likely to express satisfaction with his or her job, and employers are apt to be satisfied with the vocational student's attitudes toward work and preparation in skills needed on the job. Within the first four years after high school, the secondary school vocational graduate is no more likely than the general curriculum graduate to be self-employed, with the possible exception of the graduate of an agriculture program, or to continue his or her education in a postsecondary program of the kind offered at a technical institute or two-year college.

What can be said about the typical commercial (business and office) student in secondary school? The outlook for this student, who is likely to be female, is favorable. The typical student in a commercial program has similar reading proficiency and better writing skills than the average student in general or other vocational programs, although the commercial student is less proficient in computational skills. The commercial student is less apt to drop out of high school before graduation than a student in the general curriculum. Moreover, in the years following graduation, the typical student in a commercial program is likely to be employed in a job related to his or her training and is less likely to experience unemployment than the student in the general curriculum.

While these composite pictures aid in describing the effects of vocational education on participants as revealed in disparate studies, one hesitates to make or accept blanket statements based on prior research. Much of this research consists of information obtained from follow-ups of samples in national longitudinal studies. Findings of prior research must be viewed with caution for all of the following reasons. National longitudinal studies have not been designed for the purpose of investigating effects of vocational education. Variation in the content, quality, and duration of vocational programs is masked in aggregated figures based on a large number of programs in national or State studies. Self-reports of students are subject to bias and are not necessarily reliable as a means of identifying students' curriculum as vocational. One of the most severe limitations in drawing conclusions on the effects of vocational education from comparisons of different curriculum groups concerns selection of students into the curricula; ". . . inferences drawn from a comparison of ostensibly similar students in occupational and general programs may reflect unmeasured variables associated with self-selection."[3] Finally, it is never certain to what extent differences in findings of studies of vocational education conducted at different periods of time during the last 15 years reflect changes in instruction that have occurred in that time.

Gainful Employment

The Vocational Education Act of 1963 includes in its definition of vocational education any "program designed to fit individuals for gainful employment as semi-skilled or skilled workers or technicians in recognized occupations (including any program designed to fit individuals for gainful employment in business and office occupations . . . but excluding any program to fit individuals for employment in occupations . . . generally considered professional or as requiring a baccalaureate or higher degree)" (Section 8). Several aspects of gainful employment will be considered.

Employment status.[4] The most recent and possibly the most precise estimates of unemployment rates of high school graduates in different curricula are provided in the National Longitudinal Survey of Young Americans.[5] Preliminary figures from this survey revealed markedly less unemployment for black male graduates of vocational programs (10.9 percent) than for black male graduates of the general curriculum (22.1 percent). The unemployment rate of black female vocational graduates was also lower than that of black female general curriculum graduates; however. a sizable percentage of both groups of females was unemployed (23.1 and 33.7 percent, respectively). Unemployment rates of white and Hispanic males from the vocational curriculum were slightly lower than those from the general curriculum, while unemployment rates of white and Hispanic females from the vocational curriculum were slightly higher than those of general curriculum graduates.

Since the majority of female enrollment in vocational programs is in the commercial (business and office) program, the unemployment rate of female commercial program participants warrants separate consideration. This rate has been reported by only one national survey, which indicated that both white and black females who had enrolled in or completed a commercial program in secondary school experienced far less unemployment within ten years after high school than general curriculum participants.[6]

About 20 percent of the male students in vocational programs in this survey sample were enrolled in commercial programs. Unlike female graduates of commercial programs, only slight differences between unemployment rates of male commercial and general program graduates were found within thirteen years after high school (1966-1973), with male graduates of commercial programs tending to have a slightly higher unemployment rate than male graduates of the general curriculum.[7] On the other hand, for white male graduates of vocational programs other than commercial, the percentage who experienced unemployment within thirteen years of graduation was slightly lower than the percentage of white male general curriculum graduates.[8] This difference in rates, while consistent during the years from 1968 to 1973, was typically only 1 to 2 percentage points in any given year.

Unemployment rates of community college graduates according to their occupational specialty were reported in one study. Rates of graduates of three community colleges in California who had been enrolled in general and vocational programs indicated that graduates of office, trade and industry, and technical programs experienced significantly less unemployment than general curriculum graduates within two years after graduation; sample sizes in each vocational program, however, were small.[9]

Occupational status. The secondary school vocational curriculum is intended to provide its graduates with preparation to meet the requisites for entry into semi-skilled and skilled occupations. Within four years after entry into the labor market, it was in fact found that a greater percentage of male graduates of secondary vocational education programs than of the general curriculum was employed in semi-skilled (operative) or skilled (craft) occupations, while a greater percentage of male graduates of general than vocational programs was employed as unskilled workers (laborers or unskilled service workers).[10] Also, a much larger percentage of female vocational graduates than general graduates was found to be in clerical jobs two and four years after high school.[11]

Hourly wages. Reported differences between hourly wages[12] of male graduates of high school vocational and general programs one to eight years after graduation (1966-1979) have been small, with average wages of vocational graduates generally slightly higher.[13] This finding for males has been reported fairly consistently for blacks and whites and for samples including or excluding individuals who have had postsecondary education. Wage differences of female graduates of vocational and general programs during the same time period have also usually been slight for both whites and blacks, but the direction of the difference has not been consistent from one longitudinal survey to another.[14] Findings of State and local studies pertaining to differences in wage rates between vocational education graduates and graduates of other secondary programs have not been consistent; some have reported no difference in wages,[15] while others have reported that vocational graduates earn more than graduates of other programs initially, but not over time.[16]

Certain factors have been found to be associated with higher wages for graduates of one curriculum relative to another: graduates of vocational programs who live in metropolitan areas were shown to have higher hourly wages than graduates of the general curriculum in those areas; vocational education graduates with relatively high scholastic aptitudes were found to have higher wages than graduates of the general curriculum with high aptitudes; and general curriculum graduates from relatively high socioeconomic backgrounds were found to have higher wages than graduates of vocational programs with high socioeconomic status.[17] This differential effect of aptitude, socioeconomic status, and urban residence on wages of students in different curricula indicates that these factors must be taken into account when effects of different curricula on graduates' wages are compared.

Number of hours per week or weeks per year employed. The average number of hours a week worked by male graduates of secondary vocational programs in 1979, who had been in the labor market one to three years following graduation, did not differ markedly from that of male graduates of the general curriculum.[18] Young men in both curricula worked an average of approximately 40 hours a week. Young women in this survey were working an average of approximately 36 hours a week one to three years after high school. regardless of whether they had graduated from the vocational or the general curriculum.

It would be useful to know whether work experience in high school is associated with a greater number of weeks worked or hourly wages of vocational students, relative to general curriculum students, in the years after high school. No information exists on this subject, but it has been reported that high school work experience is significantly related to subsequent wages and weeks of working.[19] Specifically, the number of hours a student worked each week while a senior in high school was found to be positively associated with the number of weeks he worked per year and his hourly wages during each of the first four years after high school. Participation in the vocational curriculum was not found in this study to be related to the annual number of weeks worked or to wages during the first four years after high school. This finding is consistent with those of studies mentioned previously, which did not indicate marked differences in wages or hours worked per week between participants of vocational and general programs. Whether high school work experience has a differential effect on vocational and general students' subsequent wages or work hours remains to be determined.

Relevance of training to job. Employment related to training is one of two criteria specified in the Education Amendments of 1976 for evaluating the effectiveness of a high school vocational curriculum. Only a few studies have used an objective job-classification measure to examine the relevance of training to jobs. The following percentages of graduates of secondary school vocational programs were found to be employed in occupations related to their high school program four years after high school in 1976: 68.2 percent of business graduates; 41.5 percent of health program graduates; and 34 percent of agriculture program graduates.[20]

Among vocational education graduates of community colleges in Hawaii, high percentages were reported to be employed in jobs related to their training within two and one-half years after graduation, as follows: business--93 percent; health--90 percent; distributive education--88 percent; trade and industry--87 percent; and technical--83 percent.[21]

Employers' satisfaction. In addition to employment in occupations related to training, the other criterion specified in the Education Amendments of 1976 for assessing effectiveness of a high school vocational curriculum is employers' satisfaction with employees' training as preparation for employment. Without regard to occupational specialty, employers have generally expressed satisfaction with secondary school vocational graduates' preparation in skills required for the job,[22] as well as with their attitudes toward work.[23]

A survey in Iowa reported similar findings with postsecondary vocational education graduates.[24]

Type of employment. Entrepreneurship has sometimes been regarded as an important potential benefit of vocational education. Does vocational education increase the likelihood of a person's becoming self-employed? Percentages obtained with the NLS-1972 sample indicated no marked difference in the percentage of self-employed vocational and general curriculum graduates four years after high school.[25] Similar findings were reported with the sample of the National Longitudinal Survey of Labor Market Experience based on a follow-up in 1973.[26] Graduates of agriculture programs may be an exception. A follow-up of male graduates in the Project Talent sample revealed that more agriculture program graduates were self-employed five years after graduation (21.8 percent) than graduates of general, commercial, or other vocational programs (7.2, 3.8, and 4.4 percent, respectively).[27]

Job satisfaction. Only self-reported data, which are subject to positive response bias, exist on this subject. High percentages (74-87 percent) of vocational education graduates, both male and female, black and white, who were employed part-time or full-time one to four years after graduation reported that they were either satisfied or very satisfied with their job, according to follow-up surveys of the NLS-1972 sample.[28] Job satisfaction of graduates of secondary school vocational programs has been found to be influenced by wages, weekly hours, and relevance of training to the job.[29] In addition, graduates of cooperative programs in high school have indicated that they were more satisfied than graduates of noncooperative vocational, work-study, and academic programs.[30]

Postsecondary vocational education graduates have also expressed satisfaction with their jobs, as reported in two local studies.[31]

Academic Credentials for Enrollment in Advanced Technical Education Programs

Attainment of credentials necessary for enrollment in advanced technical education programs, an intended outcome of vocational education in the Education Amendments of 1968, was broadened in the Education Amendments of 1976 from enrollment in advanced technical education programs to preparation for a career requiring other than a baccalaureate or advanced degree. The concern reflected in the law was that students' options for continuing their preparation for advanced technical and sub-professional occupations should not be thwarted by having graduated from a vocational program. The intent has frequently been misinterpreted, however. Percentages of secondary vocational graduates who are enrolled in four-year baccalaureate programs, rather than nonbaccaleaurate programs such as those in technical institutes and two-year colleges, are sometimes used to indicate vocational students' attainment of the academic credentials intended in the law. Furthermore, low percentages of vocational education graduates in postsecondary programs have been taken by some as evidence that these students are tracked at an early age into an educational path that limits their future choice of occupations, although these percentages could also reflect students' decisions, prior to enrolling in a secondary vocational program, not to pursue further education.

The most appropriate evidence of attainment of credentials would be comparisons of percentages of graduates of secondary vocational and general programs who satisfy admission requirements at two-year institutions, or longitudinal data indicating the educational plans of students at entry into secondary vocational programs and their later participation in postsecondary nonbaccalaureate programs; unfortunately, no such data exist. The only data consist of numbers of graduates of secondary vocational and general curricula who pursue various kinds of education after high school. Of the NLS-1972 sample, more graduates of the vocational than the general curriculum had not continued their education within four years after graduation (67.7 and 54.0 percent, respectively); a slightly higher percentage of vocational graduates (16.4 percent) than general curriculum graduates (14.7 percent) enrolled in a postsecondary program other than one offered in a four-year college.[32]

Occupational Knowledge and Skills

Some information on vocational students' occupational knowledge is provided in the National Longitudinal Survey of Labor Market Experience. This information is limited to paper-and-pencil measures. Research evidence of students' occupational skills, however, is nearly nonexistent. Percentages of students who correctly identified occupational duties performed in several occupations indicated that males and females in commercial programs had equivalent to or greater knowledge of those occupations than males and females in the general curriculum.[33]

Male students in vocational programs other than commercial and male students in the general curriculum demonstrated similar acquaintanceship with occupations which do not require a college degree, but these vocational students demonstrated far less knowledge of occupations requiring advanced education than did male students in the general curriculum. Female students in vocational programs other than commercial revealed less knowledge than did females in the general curriculum of duties performed in all but two occupations. M female vocational students than general students showed knowledge of duties performed by a nurse's aide and department store buyer.

Basic Skills

Ability to read with understanding, write, and compute are generally regarded as critical to subsequent learning and the employability of a student entering the labor market, upgrading present skills, or being retrained. By the 1960's, as concern with high unemployment among minority groups rose, the importance of basic skills to vocational education students had come to be widely recognized. The report of the Panel of Consultants appointed by President Kennedy in 1961 stated that "general education--language and arithmetic skill, plus basic knowledge of the world about us--itself contributes indispensably to occupational competence. Vocational education and general education are complementary and equally important to individual occupational competence."[34] The Vocational Education Amendments of 1968 supported the Federal commitment to this broad view of vocational education by including in the definition of vocational education "remedial or related academic and technical instruction . . ." (P. L. 90-576, Sec. 108(1)). Improvement in basic skills has recently been prescribed as a remedy for youth unemployment,[35] although knowledge of how to accomplish that end with vocational education students is minimal.

In order to examine the effects of vocational education on students' basic skills--that is, to determine whether or not participation in secondary vocational programs enhances or diminishes students' basic skills--information on students' proficiency in basic skills over time is necessary. This information is not yet available from prior research.[36] However, descriptive information is available on the level of proficiency in basic skills attained by vocational students in secondary programs, and it is valuable to explore this descriptive information in detail.

Available data[37] provide an indication of the levels of vocational education students' basic skills relative to those of students in other curricula. Examination of average scores of students in the three major curricula (academic, general, and vocational) is meaningful in the sense that basic skills are of intrinsic educational value to all students, regardless of whether those skills translate directly into economic outcomes.[38] Comparison of basic skills of students in vocational and general curricula is appropriate for the additional reason that graduates of these two curricula may compete for jobs and therefore may require similar levels of basic skills to be competitive in the labor market.

Mean scores on tests of reading comprehension, vocabulary, and mathematics of vocational students in the NLS-1972 sample[39] indicate that vocational students performed at about the same level as students in the general curriculum but scored approximately one standard deviation below academic students on all three.[40] Other surveys revealed similar findings. For example, mean reading scores of vocational students in the Youth in Transition[41] and Massachusetts[42] samples were similar to the means of general curriculum students in those samples but well below the means of academic students. Mathematics scores of vocational students in the Massachusetts and 1976 National Assessment of Educational Progress (NAEP)[43] samples indicated this same pattern, as did writing scores of the Massachusetts vocational students.

Reported findings of a Statewide mathematics assessment in Minnesota appear at first glance to be an exception to this pattern. Mean mathematics scores of vocational students differed from those in the NLS-1972 and Massachusetts surveys in that the Minnesota vocational students' mean was the same as that of the total sample.[44] These results must be interpreted cautiously, however, since all 17-year olds who had taken one-half year or more of vocational courses were tested and means were not reported according to students' high school curriculum. Rather, scores were grouped for students according to the number of vocational courses they had taken. Thus, the mean of "vocational" students with one year or less of vocational courses (almost half of all students who had had any vocational training) clearly reflected scores of students whose primary curriculum identification was not vocational.

Scores of business students were separately tabulated in the Youth in Transition[45] and Massachusetts[46] surveys. Mean scores of business students in both surveys indicated that these students' average reading level was similar to that of other vocational and general curriculum students. However, average writing scores of business students were higher: mean scores of business students on the two writing tests in the Massachusetts survey exceeded those of other vocational students and were similar to State means. In contrast, the mean mathematics score of business students in this sample was lower than that of students in the three curricula.

Reading scores of vocational students who transferred into the vocational curriculum from another curriculum before their senior year of high school were separately reported in the Youth in Transition survey.[47] In both comprehension and vocabulary, mean scores of these 165 students were almost identical to those of the 51 students who had remained in the vocational curriculum throughout high school.

It would be useful to know the areas of strength and weakness in vocational students' ability to perform particular tasks, such as locating information in a text, which have been shown to have wide applicability across jobs;[48] however, no information exists on the extent to which those job-related tasks are reflected in measures of basic skills commonly used in schools and State assessments. Additionally, available data do not provide evidence of the effects of vocational education on the development of students' basic skills. This evidence remains to be derived from analysis of basic skills at different points in time which takes into account the initial abilities and demographic characteristics of students in different curricula.

Years of Secondary Schooling

Vocational education has been viewed by some as a means of "increasing the holding power of the schools."[49] Data for examining this subject consist mainly of dropout rates of curriculum groups reported in national longitudinal studies, with some explanatory information provided by State and local reports.

The dropout rate of students in commercial programs is lower than that of students in the general curriculum, according to two national longitudinal surveys. The dropout rates of commercial and general students in the Project Talent sample were reported to be 12.5 and 16.2 percent, respectively, while more students in agriculture programs (27.3 percent) than in the general curriculum dropped out.[50] In the sample of The National Longitudinal Survey of Labor Market Experience, percentages of white male and female dropouts from commercial programs were slightly lower than those in the general curriculum, when students with similar scholastic aptitude and socioeconomic status in the two curricula were compared.[51]

Findings pertaining to dropout rates of students in vocational programs other than commercial have not been consistent among studies conducted with the Project Talent sample.[52] A one-year follow-up of the sample of the National Longitudinal Survey of Labor Market Experience indicated that a higher percentage of males in vocational programs other than commercial had dropped out of school than males in the general curriculum, a difference which was more marked for black males.[53]

Some information is available on factors associated with students' dropping out of vocational programs. The three-year follow-up of the Project Talent sample in 1963, for instance, indicated that the agriculture program accounted for the greatest percentage of dropouts from vocational programs.[54] A recent study of dropouts of secondary vocational programs in New Mexico, which was conducted at the end of the school year in which these students would have graduated, indicated that students were most likely to drop out in the tenth grade.[55] On the whole, more males dropped out than females, and in programs traditionally dominated by one sex, dropout rates of the other sex were reported to be higher.[56]

With regard to reasons for dropping out, females in the New Mexico sample were likely to drop out for personal reasons, in contrast to males who were reported to drop out for reasons related to school.[57] Reasons for dropping out, as stated by former students in cooperative education programs in Boston, suggested that the type of program in which the student was enrolled was not related to his reason for dropping out.[58] Authors of that study concluded that outside work experience enhanced students' motivation to attend school.

A Final Note

Only a partial look at the effects of vocational education on participants has been presented in this report. This study, when completed, will not be limited to the outcomes of vocational education previously discussed. Nor will the study depend entirely on prior research. Reanalysis of data from extant national longitudinal surveys will be undertaken to supplement information available from prior research. The additional information provided by reanalysis is especially necessary to assess the effects of vocational education at the postsecondary level, about which little is known at present. In addition to supplementing information already available, reanalysis of extant data may yield some findings which contradict those of prior research. The complete picture which this study will provide of the effects of vocational education will be presented in the final report of the Vocational Education Study.

FOOTNOTES

1. W. B. Fetters, National Longitudinal Study of the High School Class of 1972: Student Questionnaire and Test Results by Sex, High School Program, Ethnic Category, and Father's Education (Washington, D.C.: U.S. Department of Health, Education and Welfare, Education Division, National Center for Education Statistics, 1975).

2. John Grasso, "The Contributions of Vocational Education Training and Work Experience to the Early Career Achievements of Young Men" (Ph.D. dissertation, The Ohio State University, 1975).

3. J. T. Grasso and J. R. Shea, Vocational Education and Training: Impact on Youth (Berkeley: The Carnegie Council on Policy Studies in Higher Education, 1979), p. xxix.

4. Of the two statistics routinely reported by the Bureau of Labor Statistics and the Bureau of the Census, labor force participation rate and unemployment rate, unemployment rate is the more appropriate in comparisons between graduates of different curricula who have been out of high school for a short time. Since persons whose only activity is school attendance are not counted in the labor force, the greater the percentage of graduates from one curriculum who continue their education the lower the labor force participation rate for that curriculum. Consequently, the labor force participation rate of graduates of the vocational curriculum can be expected to appear higher in the short run than that of graduates of other curricula.

5. The sample for this survey consisted of 12,693 youth aged 14 to 21 in the spring of 1979. Questions were asked of the youth themselves, rather than of heads of households, and unemployment rates were calculated for high school graduates who were in the labor force from one to three years in the Spring of 1979. The sampling design provided an overrepresentation of blacks, Hispanics, and disadvantaged whites. Persons who were neither black nor Hispanic were counted as white. Vocational students include those in commercial programs. Findings are reported in M. Borus, J. E. Crowley, R. Rumberger, R. Santos, and D. Shapiro, Pathways to the Future: A Longitudinal Study of Young Americans. Preliminary Report: Youth and the Labor Market - 1979 (Columbus: The Ohio State University, Center for Human Resource Research, 1980).

6. Grasso and Shea, *op.cit.*; J. R. Shea, R. D. Roderick, F. A. Zeller, A. I. Kohen, and Associates, *Years for Decision*, vol. 1 (Washington, D.C.: U.S. Government Printing Office, 1971). Unemployment rates were reported for the sample in the National Longitudinal Survey of Labor Market Experience for the years 1968 to 1972.

7. Grasso and Shea, *op. cit.* These unemployment rates were derived for white male graduates of commercial programs.

8. *Ibid.* No consistent pattern emerged from comparisons between black male graduates of secondary vocational programs other than commercial and graduates of the general curriculum, or from comparisons between black or white female graduates of general and vocational programs other than commercial.

9. L. R. Shymoniak, "The Analysis of Cost Effectiveness Vocational Education Programs in Selected California Community Colleges" (Ph.D. dissertation, University of California, Los Angeles, 1972).

10. S. S. Peng and M. M. Holt, *National Longitudinal Study: Tabular Summary of the Second Follow-Up Questionnaire Data 2-1/2 Years After High School*, 2 vols. (Washington, D.C.: U.S. Government Printing Office, 1977); S. S. Peng, J. M. Wisenbaker, S. S. Bailey, and D. Marnell, *National Longitudinal Study: Tabular Summary of the Third Follow-Up Questionnaire Data*, 4 vols. (Washington, D.C.: U.S. Government Printing Office, 1978).

11. *Ibid*.

12. Hourly wages are less dependent on the number of weeks or hours worked than are annual or weekly earnings.

13. Borus et al., *op. cit.*; A. Harnischfeger and D. Wiley, "High School Tracking and Vocational Stereotyping: Means of Socioeconomic Placement," paper prepared for the National Commission for Employment Policy, April 1980; A. I. Kohen and H. S. Parnes, *Career Thresholds: A Longitudinal Study of the Educational and Labor Market Experiences of Male Youth*, vol. 3 (Columbus: The Ohio State University, Center for Human Resource Research, 1970); N. Lewin-Epstein, "Vocational Education," in *High School and Beyond: Policy Issues and Research Design* (Chicago: National Opinion Research Center, 1979); D. E. Wiley and A. Harnischfeger, "High School Learning, Vocational Tracking and What Then?," Draft Report (Chicago: CEMREL, 1980).

14. Borus et al., *op.cit.*; Harnischfeger and Wiley, *op.cit.*; Lewin-Epstein, *op.cit.*; R.D. Roderick and J. M. Davis, *Years for Decision*, vol. 2, Manpower Research Monograph No. 24 (Washington, D.C.: U.S. Government Printing Office, 1974); Wiley and Harnischfeger, *op. cit.*

15. G. H. Copa and B. A. Kleven, *Job Selection Patterns: Linkage Between Vocational Education Programs and the Labor Market* (Minneapolis: Minnesota Research Coordinating Unit for Vocational Education, University of Minnesota, 1977); I. L. Herrnstadt, M. A. Horowitz, A. Morris, and A. M. Sum, *The Transition from School to Work: The Contribution of Cooperative Education Programs at the Secondary Level* (Boston: Northeastern University, Department of Economics, 1979).

16. T. W. Hu, M. L. Lee, E. W. Stromsdorfer, and J. J. Kaufman, *A Cost Effectiveness Study of Vocational Education: Final Report* (University Park, PA: Pennsylvania State University, 1968); A. D. Swanson, *A Study of the Costs, Benefits, and Effectiveness of Occupational Education* (Buffalo: State University of New York at Buffalo, Faculty of Educational Studies, 1976).

17. Grasso and Shea, *op. cit.* These findings are based on 1971 wages of white male high school graduates.

18. Borus et al., *op. cit.* These findings were obtained with male high school graduates in the National Longitudinal Survey of Young Americans who were not enrolled in postsecondary education.

19. R. H. Meyer and D. A. Wise, *High School Preparation and Early Labor Force Experience*, John F. Kennedy School of Government Discussion Paper Series No. 86D (Cambridge, Mass.: Harvard University, 1980). This research was conducted with the NLS-1972 sample. A proxy measure of vocational curriculum was used--namely, graduates' perceptions one year after high school of whether they had received any specialized training in high school which was intended to prepare them for immediate employment upon leaving school.

20. Lewin-Epstein, *op. cit.* An objective job classification measure was used in this study. Percentages of graduates in other occupational specialties were not reported.

21. University of Hawaii Community Colleges, *Hawaii Community College Vocational-Technical Graduate Follow-Up Studies, 1968-71* (Hilo, Hawaii: University of Hawaii, 1972). *The Dictionary of Occupational Titles* was used in this study to classify jobs.

22. B. Blackford, R. Ruch, J. Aheran, and C. Seymour, *Why Johnny Can Work: An Analysis of Employers' Ratings of Secondary Area Vocational Technical Center Graduates* (Pontiac, Michigan: Northeast Oakland Vocational Education Center, 1979); Iowa Department of Public Instruction, *Report on Employer Follow-Up 1978-79 Survey* (Des Moines: Iowa Department of Public Instruction, 1979); *A Report to the Iowa Department of Public Instruction on Employer Reactions to Employees Trained in Preparatory Career Education Programs* (Iowa City: American College Testing Program, 1977).

23. Blackford et al., *op. cit.*; *A Report to the Iowa Department of Public Instruction on Employer Reactions to Employees Trained in Preparatory Career Education Programs*, *op. cit.*

24. *A Report to the Iowa Department of Public Instruction on Employer Reactions to Employees Trained in Preparatory Career Education Programs*, *op. cit.*

25. Lewin-Epstein, *op. cit.*

26. Grasso and Shea, *op. cit.*

27. H. Vincent, *An Analysis of Vocational Education in Our Secondary Schools* (Washington, D.C.: U.S. Department of Health, Education, and Welfare, Office of Education, 1969). Follow-up data on self-employment were obtained in 1965.

28. F. R. Creech, N. E. Freeberg, D. A. Rock, K. M. Wilson, and K. H. Young, *Comparative Analysis of Postsecondary Occupational and Educational Outcomes for the High School Class of 1972. Executive Summary* (Princeton, Educational Testing Service, 1977); Peng and Holt, *op. cit.*; Peng et al., *op. cit.*

29. Herrnstadt et al., *op. cit.*

30. *Ibid.*

31. G. R. Ballo, *A Comparative Follow-Up Study of Graduates and Non-Graduates* (Lewiston, Idaho: Lewis-Clark Normal School, 1971); G. E. Von Stroh, "A Socioeconomic Study of Vocational-Technical Education Students" (Ph.d. dissertation, University of Oklahoma, 1968).

32. Lewin-Epstein, *op. cit.*

33. Grasso and Shea, *op. cit.* Questions called "Knowledge of the World of Work" were given to young men in 1966 and young women in 1969. Students who answered these questions were in grades 10 to 12.

34. Panel of Consultants on Vocational Education, *Education for a Changing World of Work* (Washington, D.C.: U.S. Government Printing Office, 1963), p. 264.

35. *Youth Employment Initiatives: Background Report* (Washington, D.C.: The White House Press Office, 1980).

36. Scores on tests of basic skills of students at three points in time from 1961 to 1967 when they were in the fifth through eleventh grade were reported in T. L. Hilton, "A Study of Intellectual Growth and Vocational Development," Final Report on Grant No. OEG-1-6-061830-0650 to the U.S. Department of Health, Education and Welfare, Office of Education (Princeton: Educational Testing Service, 1971). By the eleventh grade, the data point when students' high school curriculum becomes applicable, only 50 percent of the original sample remained. That sample is not representative of students in eleventh grade vocational or general programs and, therefore, this data cannot be taken as reliable evidence on effects of vocational programs on students' basic skills.

37. Available data on basic skills of vocational students come mainly from two sources: nationally representative student surveys and State assessments of secondary school students' basic skills. Since data on basic skills have not generally been collected for the purpose of examining proficiencies of vocational students, scores of students in different vocational programs have usually not been separately tabulated or, as in the case of the NLS-1972, were collected but not separately reported by occupational specialty. Assessments of writing ability of vocational students are rare, probably because reliable and valid essay tests are expensive and time-consuming to construct and score. No data have been reported for different types of vocational schools. There probably are additional data on the basic skills of vocational students in State education departments or large city school systems which have not been made generally available for research purposes.

38. The assumption is made that scores on basic skills measures are not dependent on prior knowledge of a content area to which students in the vocational curriculum may not have been exposed.

39. Scores of 15,625 twelfth grade males and females were reported in Fetters, *op.cit.*

40. When scores are normally distributed, the mean is that score above and below which an equal number of scores fall. Thirty-four percent of the scores fall within one standard deviation below the mean, and 34 percent fall within one standard deviation above the mean.

41. Scores of approximately 1,400 tenth grade males in vocational programs other than commercial were reported in J. A. Johnston and T. N. Davidson, Vocational Education--Its Place in Public Schools, Working Paper 8 (Ann Arbor, Michigan: University of Michigan, Institute for Social Research, 1972).

42. Scores of approximately 4,000 twelfth grade males and females in vocational programs other than commercial were reported in Massachusetts Assessment of Basic Skills 1978-79, Technical Report (Boston: Massachusetts Department of Education, 1979).

43. Scores of 10,614 17-year old male and female vocational students were reported in "Some Preliminary Analyses of National Longitudinal Study Background Items Used in the National Assessment," 1977. (mimeographed).

44. I. Ludeman and R. M. Schneiderhan, Statewide Mathematics Performance Related to Career and Vocational Education, Final Report (St. Paul: Minnesota Department of Education, 1976).

45. Johnston and Davidson, op. cit.

46. Massachusets Assessment of Basic Skills 1978-79, op.cit.

47. Johnston and Davidson, op. cit.

48. Generic Skills: Keys to Job Performance (Ottawa, Ontario: Canada Employment and Immigration Commission, 1977).

49. National Academy of Education, Education for Employment: Knowledge for Action, Report of the Task Force on Education and Employment (Washington, D.C.: Acropolis Books, Ltd., 1979).

50. Vincent, op. cit. Dropout rates were obtained in 1963 for students who had been tenth graders three years earlier.

51. Grasso and Shea, op cit. Dropout rates were obtained in a follow-up in 1966-69 for students who had been in the tenth to twelfth grade one year earlier.

52. J. Coombs and W. W. Cooley, "Dropouts: In High School and after School," American Educational Research Journal 5 (Summer 1968): pp. 343-363; Vincent, op. cit.

53. Grasso and Shea, op. cit.

54. Vincent, op. cit.

55. Mark Resta and John Temple, Dropout Rates Among Students Enrolled in New Mexico Secondary Vocational Education Programs (Albuquerque: University of New Mexico, Albuquerque Bureau of Business and Economic Research, 1978).

56. Ibid.

57. Ibid.

58. Herrnstadt et al., op. cit.

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APPENDIX A

THE STUDY MANDATE: EDUCATION AMENDMENTS OF 1976, AS AMENDED, PUBLIC LAWS 94-482, 95-40

Sec. 523.(b)(1) In addition to the other authorities, responsibilities, and duties conferred upon the National Institute of Education (hereinafter in this section referred to as the "Institute") by section 405 of the General Education Provisions Act, as amended by this Act, the Institute shall undertake a thorough evaluation and study of vocational education programs, including such programs conducted by the States, and such programs conducted under the Vocational Education Act of 1963, and other related programs conducted under the Comprehensive Employment and Training Act of 1973 and by the State Post-Secondary Commissions authorized by the Education Amendments of 1972. Such a study shall include-

(A) a study of the distribution of vocational education funds in terms of services, occupations, target populations, enrollments, and educational and governmental levels and what such distribution should be in order to meet the greatest human resource needs for the next 10 years;

(B) an examination of how to achieve compliance with, and enforcement of, the provisions of applicable laws of the United States;

(C) an analysis of the means of assessing program quality and effectiveness;

(D) depending on the level of funding available to the Institute, not more than three experimental studies to be administered by the Institute, in cases where the Institute determines that such experimental programs are necessary to carry out the purpose of clauses (A) through (C) and the Commissioner of Education and the Secretary of Labor are authorized, not withstanding any provision of any other law, at the request of the Institute, to approve the use of grants which educational or other agencies are eligible to receive under such Acts (in cases where such agencies agree to the uses of such grants), in order to carry out such experimental programs;

(E) findings and recommendations, including recommendations for changes in such Acts or for new legislation, with respect to the matters studied under clauses (A) through (E); and

(F) a review and evaluation of the effectiveness of programs funded under subpart 5 of part A of the Vocational Education Act of 1963 (as such Act is in effect on October 1, 1977), and to make recommendations for the redirection and the improvement of programs at all levels funded under such subpart.

(2) The Institute shall make an interim report to the President and to the Congress no later than September 30, 1980, and shall make a final report to the President and to the Congress no later than September 30, 1981, on the result of its study conducted under this section. Any other provision of law, rule, or regulation to the contrary notwithstanding, such reports shall not be submitted to any review outside of the Institute before their transmittal to the Congress, but the President and the Commissioner may make to the Congress such recommendations with respect to the content of the reports as such may deem appropriate.

(3) Sums made available pursuant to section 102 of the Vocational Education Act of 1963 (as such Act is in effect on the date of the enactment of this Act) and sections 102 and 103 of the Vocational Education Act of 1963 (as such Act is in effect on October 1, 1977), shall be available to carry out the administrative and direct cost requirements of the provisions of this subsection concerning the National Institute of Education. These funds shall not exceed $1,000,000 per year for each of the fiscal years ending prior to October 1, 1981. Ten per centum of the funds made available under this section shall be made available for purposes of carrying out the provisions of paragraph (1)(F).

(4)(A) The Institute shall submit to Congress, within 10 months after the date appropriations become available to carry out this section, a plan for the study to be conducted under this section. The Institute shall not commence such study until the first day after the close of the first period of 30 calendar days of continuous session of the Congress after the date of the delivery of such plan to the Congress.

(B) For purposes of subparagraph (A)-

(i) continuity of session is broken only by an adjournment of the Congress sine die; and

(ii) the days on which either House is not in session because of an adjournment of more than 30 days to a day certain are excluded in the computation of the 30-day period.

APPENDIX B

THE VOCATIONAL EDUCATION ACT AS AMENDED IN 1976

Part A--State Vocational Education Programs

Part A begins with a Declaration of Purpose (Sec. 101):

> It is the purpose of this part to assist States in improving planning in the use of all resources available to them for vocational education and manpower training by involving a wide range of agencies and individuals concerned with education and training within the State in the development of vocational education plans.

The Declaration lists four specific purposes:

> (1) to extend, improve, and, where necessary, maintain existing programs of vocational education,
>
> (2) to develop new programs of vocational education,
>
> (3) to develop and carry out such programs of vocational education within each State so as to overcome sex discrimination and sex stereotyping in vocational education programs (including programs of homemaking), and thereby furnish equal educational opportunities in vocational education to persons of both sexes, and
>
> (4) to provide part-time employment for youths who need the earnings from such employment to continue their vocational training on a full-time basis,
>
> so that persons of all ages in all communities of the State, those in high school, those who have completed or discontinued their formal education and are preparing to enter the labor market, those who have already entered the labor market, but need to upgrade their skills or learn new ones, those with special educational handicaps, and those in postsecondary schools, will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training.

Subpart 1--General Provisions

This Subpart authorizes funds for grants made under the other Subparts for five years, as well as authorizing funds for carrying out administrative provisions (planning, evaluation, data collection).

It also gives the formula for allotment of funds to the States and for the distribution of Federal funds within the States, including specifying amounts to be reserved for "national priority programs," and describes ways in which Federal funds must be matched.

It sets forth the requirement for a sole State agency and the responsibilities of that agency, including those pertaining to sex equity. Membership and responsibilities of local and State advisory councils are also specified.

The important requirements for planning and evaluation are set forth in this section. The components of planning are the General Application which provides assurances of compliance, the five-year plan which is the statement of long range goals and ways of attaining them, the annual update to this plan which sets out the proposed distribution and uses of funds for that year, and finally the annual accountability report. The evaluation provisions require Federal analyses of States' plans and of Federally-assisted programs, and State evaluations of such programs. This section also specifies the procedure for submission of plans, for withholding of funds if plans are not in compliance, and for review to adjudicate disputes.

Subpart 2--Basic Grant

This section authorizes the Commissioner to make grants to States to assist them in conducting vocational education programs and sets forth the purposes for which funds may be used. These uses include programs for displaced homemakers, work study programs, cooperative vocational education, energy education, and residential vocational schools.

Subpart 3--Program Improvement And Supportive Services

This section authorizes the Commissioner to make grants to the States to assist them in improving their programs and providing supportive services for these programs. It specifies the amount to be reserved for guidance and counseling services, and also states that funds may be used for contracts to support State research coordination units, exemplary and innovative programs, curriculum development programs, pre-service and in-service training, and programs to overcome sex bias.

Subpart 4--Special Programs For the Disadvantaged

This Subpart authorizes the Commissioner to make grants for allocation within the States to areas of high concentrations of youth unemployment and school dropouts. These grants can be used to pay the full cost of vocational education for disadvantaged persons.

Subpart 5--Consumer And Homemaking Education

This Subpart authorizes the Commissioner to make grants to the States for "instructional programs, services, and activities at all educational levels for the occupations of homemaking" and for associated "ancillary services . . ."

Part B--National Programs

Subpart 1--General Provisions

This Subpart describes the Federal administration of the vocational education program. It also sets forth requirements for two new data producing and coordinating systems--the vocational education data reporting and accounting system (VEDS) and the National and State Occupational Information Coordinating Committees. Finally it prescribes membership and functions of the National Advisory Council on Vocational Education (NACVE).

Subpart 2--Programs of National Significance

Funds authorized for this Subpart may be used by the Commissioner for program improvement activities, including the support of a national center for research in vocational education (NCRVE), and for training and development programs for vocational education personnel.

Subpart 3--Bilingual Vocational Training

This Subpart begins with a statement of findings which terms "acute" the problems faced by individuals of limited English-speaking ability in acquiring vocational training. The Subpart authorizes the Commissioner, in consultation with the Secretary of Labor, to fund bilingual vocational training programs as well as instructor training programs. The Commissioner is also asked to develop and disseminate accurate information on the status of bilingual vocational education in the U.S. and to evaluate the impact of such programs.

Subpart 4--Emergency Assistance For Remodeling And Renovating Vocational Education Facilities

This Subpart provides for emergency assistance, for a limited period of time, to LEAs "in urban and rural areas which are unable to provide vocational education designed to meet today's manpower needs due to the age of their facilities or" equipment. Funds may be used for remodeling and renovating.

APPENDIX C

STATE FUNDING POOLS

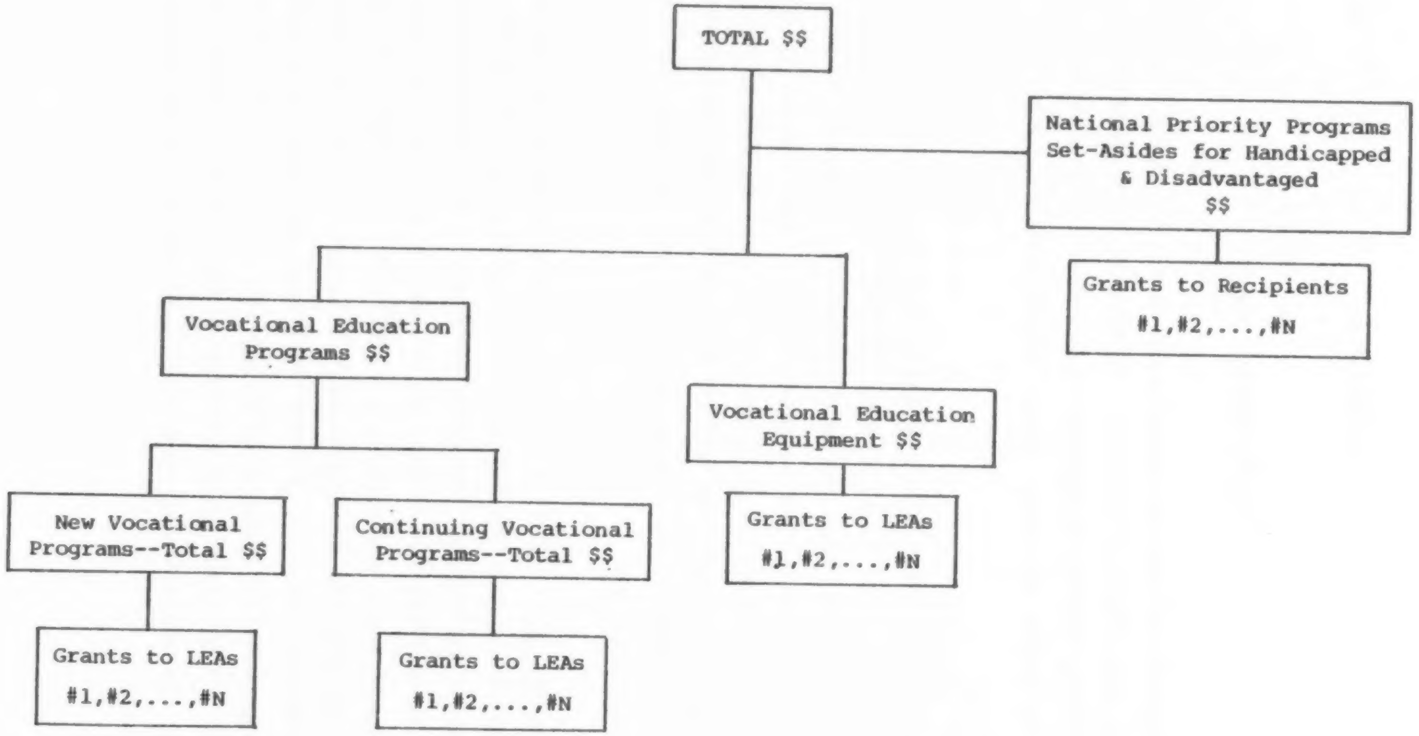
Figures 1-4 provide examples of how four States use Federal funds to meet their priorities. It is obvious from these examples that the way States categorize VEA Subpart 2 grants varies from State to State and that their objectives and priorities also vary.

Example I. This shows a State that has chosen to fund only postsecondary level institutions with VEA Subpart 2 grant funds. After allocating the National Priority Program funds among eligible recipients, the balance of the Federal grant is divided into two parts--one for programs and one for equipment purchases. The "program" category is further divided into two categories: one to provide support for ongoing programs and the other to fund new vocational programs.

Example II. In this State, the State Board for Vocational Education allocates the National Priority Program set asides among local agencies and for Statewide programs. The postsecondary set aside is divided into two pools and the funds in each are distributed among postsecondary institutions according to ability to pay and presence of higher cost students. A pool of funds for the secondary level is divided into two portions: one earmarked for comprehensive high schools and one for the area vocational centers. Thus, comprehensive high schools alone compete for one pool of VEA dollars and area vocational centers alone compete for the other.

EXAMPLE I

VEA SUBPART 2--GRANT*

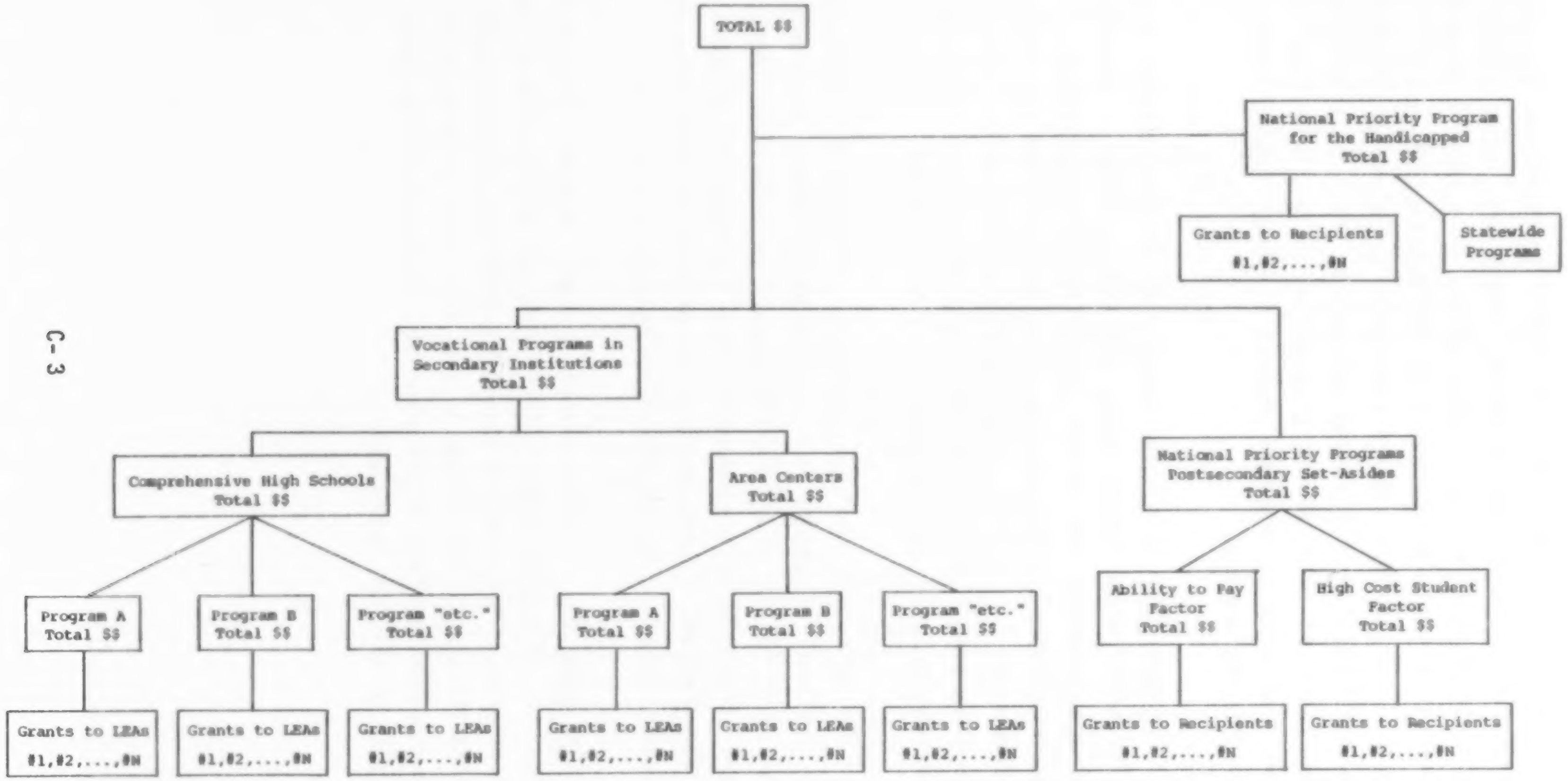

TOTAL $$
National Priority Programs Set-Asides for Handicapped & Disadvantaged $$
Grants to Recipients #1,#2,...,#N
Vocational Education Programs $$
Vocational Education Equipment $$
Grants to LEAs #1,#2,...,#N
New Vocational Programs--Total $$
Continuing Vocational Programs--Total $$
Grants to LEAs #1,#2,...,#N
Grants to LEAs #1,#2,...,#N

---

[*] Only postsecondary institutions receive Subpart 2 VEA funds.

EXAMPLE II

VEA SUBPART 2 GRANT


TOTAL $$
National Priority Program for the Handicapped Total $$
Grants to Recipients #1,#2,...,#N
Statewide Programs
Vocational Programs in Secondary Institutions Total $$
National Priority Programs Postsecondary Set-Asides Total $$
Comprehensive High Schools Total $$
Area Centers Total $$
Program A Total $$
Program B Total $$
Program "etc." Total $$
Program A Total $$
Program B Total $$
Program "etc." Total $$
Ability to Pay Factor Total $$
High Cost Student Factor Total $$
Grants to LEAs #1,#2,...,#N
Grants to LEAs #1,#2,...,#N
Grants to LEAs #1,#2,...,#N
Grants to LEAs #1,#2,...,#N
Grants to LEAs #1,#2,...,#N
Grants to LEAs #1,#2,...,#N
Grants to Recipients #1,#2,...,#N
Grants to Recipients #1,#2,...,#N

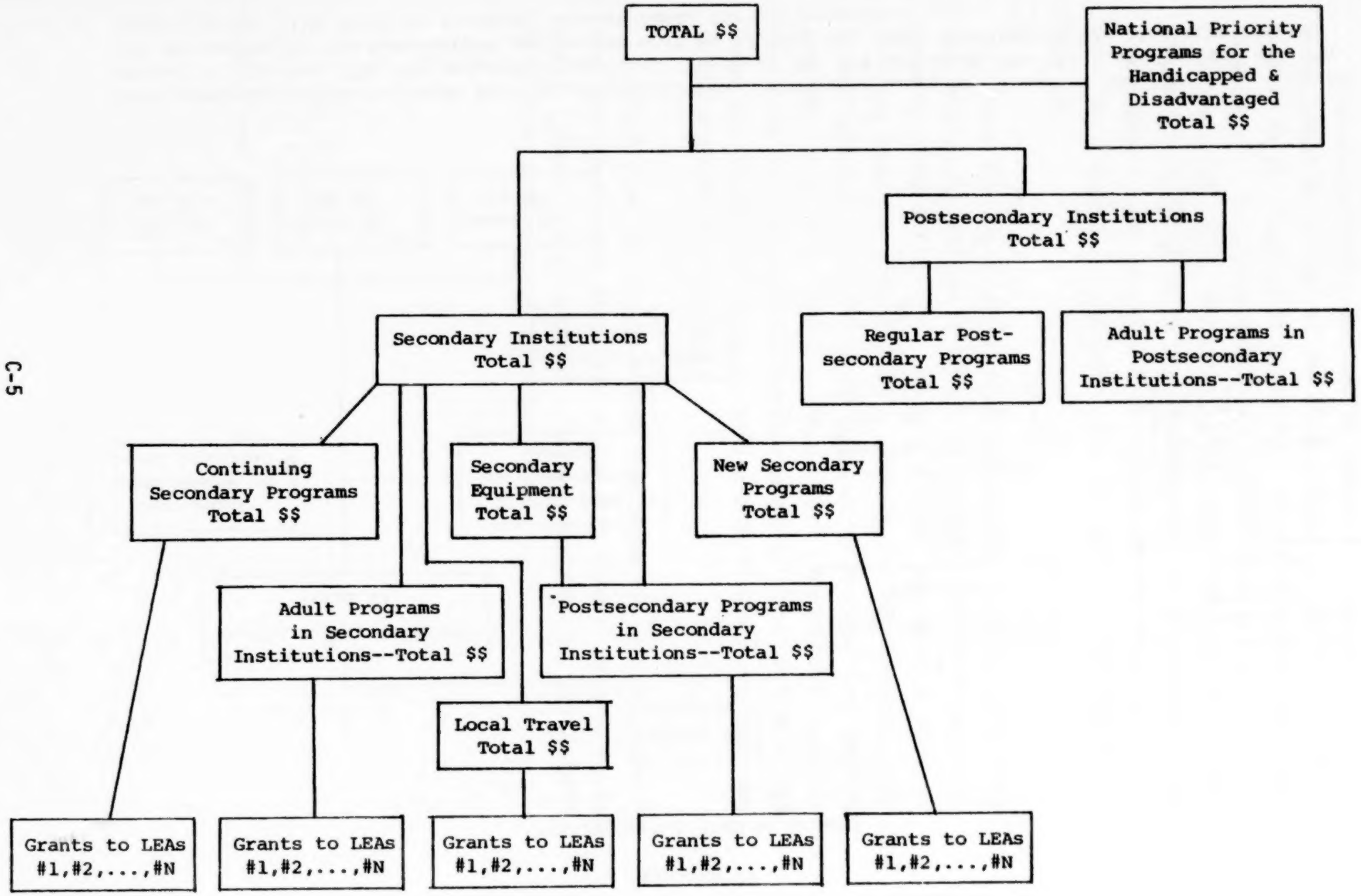
In order to encourage secondary institutions to provide comprehensive vocational programs, funds are again categorized into different vocational program pools. Only schools which offer Program "A" will be funded from the Program "A" pool, and so forth. Thus, a local agency must offer a variety of programs to receive funds from all program categories. This State also varies the amount of funds within program categories, with the result that high priority programs receive a higher reimbursement than low priority programs.

Example III. This State exemplifies the most complex Subpart 2 recategorization scheme among the sample States. Handicapped and disadvantaged set asides are distributed separately. The remaining funds are then divided into two pools, one for secondary institutions and one for postsecondary institutions. The postsecondary pool is divided in two, with one pool for regular postsecondary programs and the other for adult programs.

The secondary level categorization allocates the funds among six different purposes: 1) continuing secondary programs; 2) adult programs in secondary schools; 3) secondary equipment; 4) local travel; 5) postsecondary programs in secondary schools; and 6) new programs. Funds are then distributed to qualifying local agencies according to these State purposes.

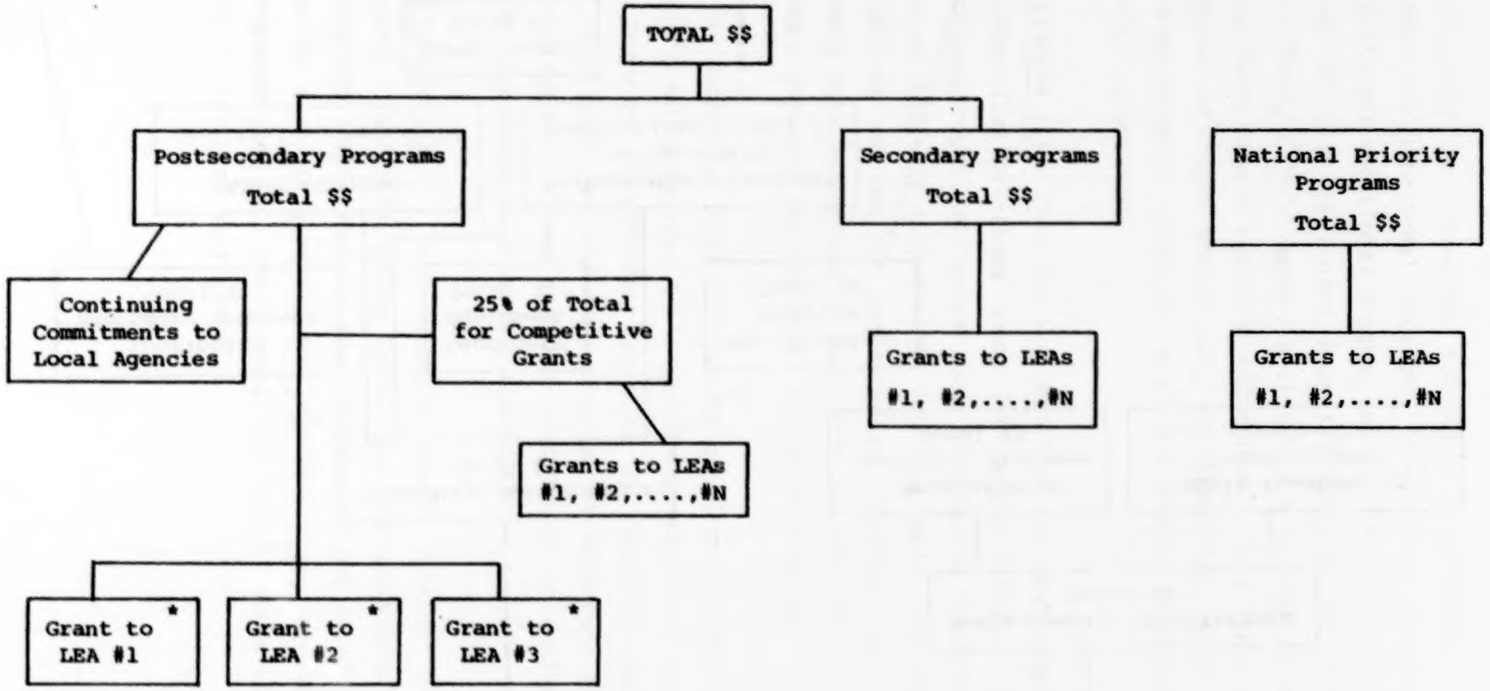
Example IV. This example shows another distribution procedure. The State agency distributes the secondary-level funds for programs after removing the handicapped and disadvantaged set asides for separate distribution. In this case, program funds and the disadvantaged and handicapped set asides are distributed by formula to selected applicants.

VEA SUBPART 2 GRANT


TOTAL $$
National Priority Programs for the Handicapped & Disadvantaged Total $$
Postsecondary Institutions Total $$
Regular Post-secondary Programs Total $$
Adult Programs in Postsecondary Institutions--Total $$
Secondary Institutions Total $$
Continuing Secondary Programs Total $$
Secondary Equipment Total $$
New Secondary Programs Total $$
Adult Programs in Secondary Institutions--Total $$
Postsecondary Programs in Secondary Institutions--Total $$
Local Travel Total $$
Grants to LEAs #1,#2,...,#N
Grants to LEAs #1,#2,...,#N
Grants to LEAs #1,#2,...,#N
Grants to LEAs #1,#2,...,#N
Grants to LEAs #1,#2,...,#N

EXAMPLE IV

VEA SUBPART 2 (AND 3) GRANTS


TOTAL $$
Postsecondary Programs Total $$
Secondary Programs Total $$
National Priority Programs Total $$
Continuing Commitments to Local Agencies
25% of Total for Competitive Grants
Grants to LEAs #1, #2,....,#N
Grants to LEAs #1, #2,....,#N
Grants to LEAs #1, #2,....,#N
Grant to LEA #1 *
Grant to LEA #2 *
Grant to LEA #3 *

*Each postsecondary institution must apportion its total VEA grant along the lines of the law; i.e., 80% for Subpart 2 purposes, 20% for Subpart 3 purposes. Further, the 20% set-aside for the disadvantaged and the 10% set-aside for the handicapped population must be adhered to. Each institution was also required to, individually, give priority to using federal funds for new programs.

The postsecondary portion of Subparts 2 and 3 of the VEA grant (about 60 percent of the funds), however, are distributed by formula to all eligible institutions. It was incumbent upon these institutions to reapportion their block grants according to criteria contained in the Act. Hence, every institution targeted 20 percent of its grant to the disadvantaged and 10 percent to the handicapped target group, and 80 percent of its funds had to be used for Subpart 2 purposes and 20 percent for Subpart 3 purposes.

These four examples indicate how States identify priorities and develop mechanisms to assure that local recipients will respond to those priorities. Each State has developed a means of insuring that new programs get a portion of the VEA grant, although none has precluded local agencies from supporting ongoing programs with VEA funds. Thus, the Congressional mandate requiring that new programs receive priority in distributing VEA funds has caused each State to make a provision for new programs in the planning process.

These examples also show that each State has multiple priorities and goals, and that each deals with Federal priorities as well. Every State, however, has accommodated to the Federal priorities in a somewhat different manner.

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